

**Candidate Conservation Agreement with Assurances
For
Greater Sage-grouse in the West Central Planning Area
Between
The Idaho Department of Fish and Game
Natural Resources Conservation Service
And the
U.S. Fish and Wildlife Service
In Cooperation with
The West Central Sage-grouse Local Working Group**

Prepared by



**In cooperation with
Idaho Department of Fish and Game
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US Fish and Wildlife Service**

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List of Acronyms

BLM.....	U.S. Bureau of Land Management
CCAA	Candidate Conservation Agreement with Assurances
CRP.....	Conservation Reserve Program
ESA	Endangered Species Act
FWS	U.S. Fish & Wildlife Service
GIS	Geographic Information System
IDFG	Idaho Department of Fish & Game
IDL.....	Idaho Department of Lands
LWG	Local Working Group
NEPA	National Environmental Policy Act
NMFS.....	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
OSC.....	Governor’s Office of Species Conservation
SGPA	Sage-grouse Planning Area
SSP.....	Site Specific Plan
USDA.....	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WCPA.....	West Central Planning Area
WCLWG.....	West Central Local Working Group

Definitions

Agencies – Those State and Federal agencies that are signatories to this agreement; Idaho Department of Fish and Game, Natural Resources Conservation Service, and U.S. Fish and Wildlife Service.

Breeding habitat –Habitats used by displaying males (leks) and pre-laying hens; nesting habitats and early brood-rearing habitats.

Brood-rearing habitat – Habitats used by hens and chicks during the summer.

Parties – All entities that are associated with this agreement; Idaho Department of Fish and Game, Natural Resource Conservation Service, U.S. Fish and Wildlife Service, and private landowners who become enrolled.

Executive Summary

Sage-grouse have become an icon of the health of sagebrush ecosystems across the West. Once plentiful, their numbers have declined for a variety of reasons, many of them human caused. Invasions of exotic annual grasses that have modified fire regimes, conversion of sagebrush stands to agricultural use, subdivision of rural lands into ranchettes and other human developments have fragmented and reduced the large, secure expanses of habitat necessary to sustain sage-grouse. The well-documented declines in the number of sage-grouse and the human-caused reasons for their decline have led to their being considered for potential listing as “threatened” or “endangered” under the Federal Endangered Species Act (ESA).

In response to a potential listing and the associated potential impacts to property owners, the State of Idaho, in coordination with the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS) and the West Central Sage-grouse Local Working Group, has developed this programmatic Candidate Conservation Agreement with Assurances (CCAA or Agreement). A CCAA is an agreement between the FWS and any non-Federal property owner who voluntarily agrees to manage their lands or waters to remove threats to species at risk of becoming listed as threatened or endangered under the Endangered Species Act of 1973, as amended. In return, those property owners receive assurances against additional regulatory requirements should that species ever be listed under ESA. Under this Agreement, the FWS will issue the State of Idaho, Idaho Department of Fish and Game (IDFG), an Enhancement of Survival permit pursuant to Section 10(a)(1)(A) of the ESA for a period of 30 years. Subsequent Certificates of Inclusion would be issued to participating property owners contingent on a habitat evaluation and development of a site-specific sage-grouse conservation plan that is consistent with this Agreement.

This Agreement is for the West Central Planning Area (WCPA) in west-central Idaho. The WCPA is unique in Idaho in that it is isolated by distance and physical barriers from other major blocks of sagebrush habitat, approximately 64% is privately owned, and private lands include much of the important habitat for the greater sage-grouse. Due to the amount of private lands within the planning area, a CCAA is the best mechanism to achieve conservation for sage-grouse while meeting the ongoing land-use needs of non-Federal property owners in the WCPA.

This programmatic CCAA includes:

- A general description of the area and activities to be covered under the Agreement
- Background and status of the species to be covered
- Discussion of the sagebrush steppe community and sage-grouse habitat within the WCPA
- Threats to sage-grouse to be reduced or removed through implementation of the Agreement
- The general conservation measures needed to reduce identified threats
- Obligations of participating property owners and other parties to the Agreement
- Expected benefits of prescribed actions in relation to the five threat factors that FWS is required to evaluate when considering a species for listing
- Funding, assurances, duration of the Agreement, monitoring and reporting, and level of take.

The foundation of a CCAA is to identify threats to the species and measures to reduce or eliminate those threats. The “Conservation Plan for the Greater Sage-grouse in Idaho” (i.e., the State Plan; Idaho Sage-grouse Advisory Committee 2006) identified 19 threats to sage-grouse across the State of Idaho. Sixteen of those threats have been deemed present in the WCPA. These threats include: fire, infrastructure, annual grasslands, grazing, human disturbance, West Nile virus, seeded perennial grasslands, predation, development, sagebrush control, insecticides, prescribed fire, climate change, isolated populations, agricultural expansion, and illegal hunting.

While this programmatic CCAA identifies threats and conservation measures to address them within the WCPA, they are only implemented through individual site-specific plans between the participating property owner, the state agency permit holder (IDFG), the NRCS and the FWS. These individual site-specific plans describe each ownership and specific conservation practices that will be implemented on enrolled lands to reduce or eliminate any unfavorable impacts to the species arising from the management and use of these lands, as well as to achieve the habitat guidelines described in the Idaho State Plan. Such conservation agreements are authorized by Section 10 of the ESA, as a means through which private property owners can meet their obligations under the ESA for species listed as “threatened” or “endangered” and also undertake proactive measures for species that might be listed in the future. A key aspect of the CCAA is the certainty it affords participating property owners. By entering into this contract with FWS and the IDFG, property owners can be confident that covered activities on their private lands are not likely to be further restricted if sage-grouse become listed.

I. Introduction, Purpose and Need

Introduction

A Candidate Conservation Agreement with Assurances (Agreement or CCAA) is an agreement between the U.S. Fish and Wildlife Service (FWS) and any non-Federal property owner who voluntarily agrees to manage their lands or waters to remove threats to species at risk of becoming listed as threatened or endangered under the Endangered Species Act (ESA) in a manner that meets the standards set forth in the regulations for CCAAs. In return, those property owners receive assurances against additional regulatory requirements should that species ever be listed under the ESA. The conservation goal of this Agreement is to secure and enhance a population of greater sage-grouse (*Centrocercus urophasianus*; hereafter sage-grouse) within the West Central Sage-Grouse Planning Area (WCPA) through the enrollment of individual property owners who agree to meet the CCAA standard. The WCPA is one of 13 such areas that define sage-grouse habitat in southern Idaho¹. Under this Agreement, the State of Idaho will hold an ESA Section 10(a)(1)(A) Enhancement of Survival Permit issued by FWS which will become active if the species is listed, and will issue certificates of inclusion to the Agreement to non-Federal property owners within the project area who agree to comply with all of the applicable stipulations of the Agreement and develop an approved site-specific plan that is consistent with the Agreement. Site-specific plans will be developed by each property owner, in cooperation with the Idaho Department of Fish and Game (IDFG), the Natural Resources Conservation Service and other qualified service providers with oversight by the FWS. The basis for conservation measures in the individual site-specific plans will be the habitat guidelines and conservation measures identified in this Agreement which is consistent with the “Conservation Plan for the Greater Sage-grouse in Idaho” (i.e., State Plan; Idaho Sage-grouse Advisory Committee 2006). The State Plan can be accessed in its entirety at http://fishandgame.idaho.gov/cms/hunt/grouse/conserv_plan/.

The greater sage-grouse is a wide-ranging species that currently occurs across 11 states and two Canadian provinces. However, the species’ distribution and numbers have shown an overall decreasing trend (Connelly et al. 2004). Between 1999 and 2003 the FWS received eight petitions to list various populations of the greater sage-grouse under the ESA. On January 12, 2005, the FWS published a finding that the species did not warrant protection under the ESA (70 FR 2244-2282). The FWS’s “not warranted” finding was challenged in court, and in December 2007, a Federal Judge ordered the FWS to reconsider its decision.

The State of Idaho plays a major leadership role in sage-grouse conservation planning, monitoring and evaluation, and research activities. In 1997, the Idaho Sage-Grouse Task Force, under direction of the Idaho Fish and Game Commission, completed the Idaho Sage-Grouse Management Plan. This plan divided Idaho into sage-grouse management areas and called for the creation of local working groups (LWGs) that would develop sage-grouse management plans for each of Idaho’s planning areas. Since 1997, local working group plans have been completed in six sage-grouse planning areas (SGPA). In 2003, a committee was appointed to draft a new, updated “Conservation Plan for the Greater Sage-grouse in Idaho” (State Plan). The final document was signed by Governor Jim Risch on July 10, 2006. The State Plan describes each of

¹ Two of the Sage-grouse Planning Areas have merged into one; thus, there are currently 12 planning areas in Idaho.

the 13 individual planning areas in Idaho, including the WCPA, and is considered to be a toolbox or working reference for all the working groups. The Plan ranked the WCPA as first among the SGPAs in terms of sage-grouse extirpation risk, due to its isolated nature, high proportion of private property, low sage-grouse population numbers, high amount of annual grasslands, and lack of connectivity with sage-grouse populations in Idaho and Oregon (Idaho Sage-grouse Advisory Committee 2006).

This planning area is characterized by sheep and cattle ranch operations that are dependent upon a mix of private lands and grazing permits on adjacent public lands. Here, the obvious holds true—listing of sage-grouse would have the greatest impacts on livestock operators. For them, these potential impacts take two forms: (1) possible questions about whether the management of their private lands violates “take” prohibitions under Section 9 of the Act, and, (2) modifications to public grazing permits associated with a listing and subsequent Section 7 consultation between the Bureau of Land Management (BLM) and FWS.

Under the State Plan, each LWG is to develop a conservation plan for their SGPA. To address this requirement, the West Central Sage-grouse Local Working Group (WCLWG), with the financial support of the Idaho Governor’s Office of Species Conservation, retained the Northwest Natural Resource Group, LLC, to work in cooperation with IDFG and the FWS in developing a CCAA for the WCPA. The IDFG will administer the Section 10 permit issued under this Agreement. However, this document was developed cooperatively with the WCLWG, IDFG, NRCS, and the FWS. This programmatic Agreement is expected to be a more effective approach to greater sage-grouse management in the WCPA than would a large number of individual agreements that would impose an unnecessary burden on the Agencies and property owners during the planning and regulatory approval process. A piecemeal approach would lead to a less-consistent and less-widespread implementation of necessary conservation measures. In this instance, a programmatic agreement is expected to generate greater collective support from property owners; to provide a more holistic approach to developing and implementing conservation that recognizes that the ecology of greater sage-grouse must be addressed both at a broad and local spatial scale; and to provide the Agencies with a manageable method to ensure that property owners in the WCPA will be able to fully participate in the conservation of this species.

The implementing regulations for the CCAA program (50 CFR 13-17), along with the draft FWS CCAA Handbook describes the “CCAA standard” against which all CCAAs are to be evaluated:

Before entering into a CCAA, however, the FWS must determine that the benefits of the conservation measures to be implemented, when combined with the benefits that would be achieved if it is assumed that conservation measures were also to be implemented on other necessary properties, would preclude or remove any need to list the covered species. ‘Other necessary properties’ are other properties on which conservation measures would have to be implemented in order to preclude or remove any need to list the covered species.

As noted in the draft CCAA Handbook (FWS 2003) and 50 CFR 13-17, the development of a CCAA is generally guided by what is needed for a particular CCAA to meet the CCAA standard. With some species, meeting the CCAA standard may require habitat restoration and a

corresponding increase in the number and/or size of the covered species' population, while other species may require only the removal of existing threats. The Handbook further identifies four situations for which conservation measures in the CCAA can meet the CCAA standard:

- *Existing Situation Meets the CCAA Standard*

In this situation, a property owner may have property that is already in suitable condition for the covered species or may already be doing the necessary conservation measures that will maintain its populations or provide habitat such that the CCAA standard is already met.

- *Existing Situation Needs Improvement to Meet the CCAA Standard*

Lands have suitable and perhaps occupied habitat, but where changes or modifications would be necessary for the habitat condition to meet the CCAA standard.

- *Ongoing Take*

In this situation, a property owner with a candidate species on his/her property is regularly engaged in an activity that results in what would be considered "take" of that species if it were listed, and they agree to discontinue or modify the activity so that "take" does not result or is minimized.

- *Voluntarily Forgoing an Action That Would Harm a Candidate*

Property owners agree to forgo or delay actions that might otherwise "take" a species if it were listed.

Purpose

There are three overarching objectives of this Agreement. The first is to promote sustainable populations of sage-grouse and associated habitat in a manner that, if similar measures were implemented on all necessary properties, would remove the need to list the species as threatened or endangered. The second objective is to help manage the impacts of land uses on sage-grouse should it become necessary to list this species. The third is to encourage non-Federal property owners to voluntarily implement proactive conservation measures that satisfy the CCAA permit standard and thus benefit greater sage-grouse within the WCPA (Figure 1).

This Agreement follows the format suggested by the FWS for CCAs and includes several basic elements, all of which must be described within a context that supports achievement of the CCAA standard:

- A general description of the area to be covered,
- The status of greater sage-grouse within the WCPA,
- Threats which must be reduced or eliminated, and,
- General conservation measures needed to enhance the survivability of the species and which are sufficient to meet the CCAA standard.

This document includes those components. However, the implementation of a programmatic CCAA requires the second element: enrolling landowners by developing individual site-specific

plans between participating property owners and the programmatic permit holder, which in this case is IDFG. These individual voluntary agreements will be consistent with all activities and conservation measures identified in this Agreement and will describe each ownership and specific conservation practices that will be implemented on enrolled lands to conserve, restore or enhance habitat for the species, as well as to reduce any unfavorable impacts to the species arising from the management and use of these lands.

Need

Individual site-specific plans are linked to the programmatic agreement through a “certificate of inclusion” which conveys the regulatory assurances provided in the permit to the enrolled property owner. By signing the certificate of inclusion, the property owner agrees to implement or maintain actions to reduce or eliminate threats to sage-grouse and sage-grouse habitat that are associated with current or future activities on the enrolled land. In return, the Federal government agrees that, during the term of the permit or certificate of inclusion, it will not seek further commitments of resources or additional actions from the property owner on non-Federal lands if the species is listed; and the enrolled property owner receives coverage under the Section 10 “Enhancement of Survival” permit for specific activities under the terms of the agreement. This policy is consistent with the FWS “Candidate Conservation Agreement with Assurances Final Policy” (64 FR 32726, June 17, 1999) and the regulations that implement the policy (69 FR 24084, May 3, 2004).

Creating a climate in which existing farmers and ranchers or other participants find it attractive to continue their current operations and to pass them along to future generations who want to maintain them is important to the long-term conservation of sage-grouse. The CCAA approach offers an opportunity for property owners and government agencies to work together voluntarily to identify and implement best management practices to preserve sage-grouse and their habitat across a large landscape. Such agreements provide assurances that participating property owners can expect to continue their operations on non-Federal lands without undue restrictions should the species become listed under the ESA, provided the terms of the CCAA permit are being implemented.

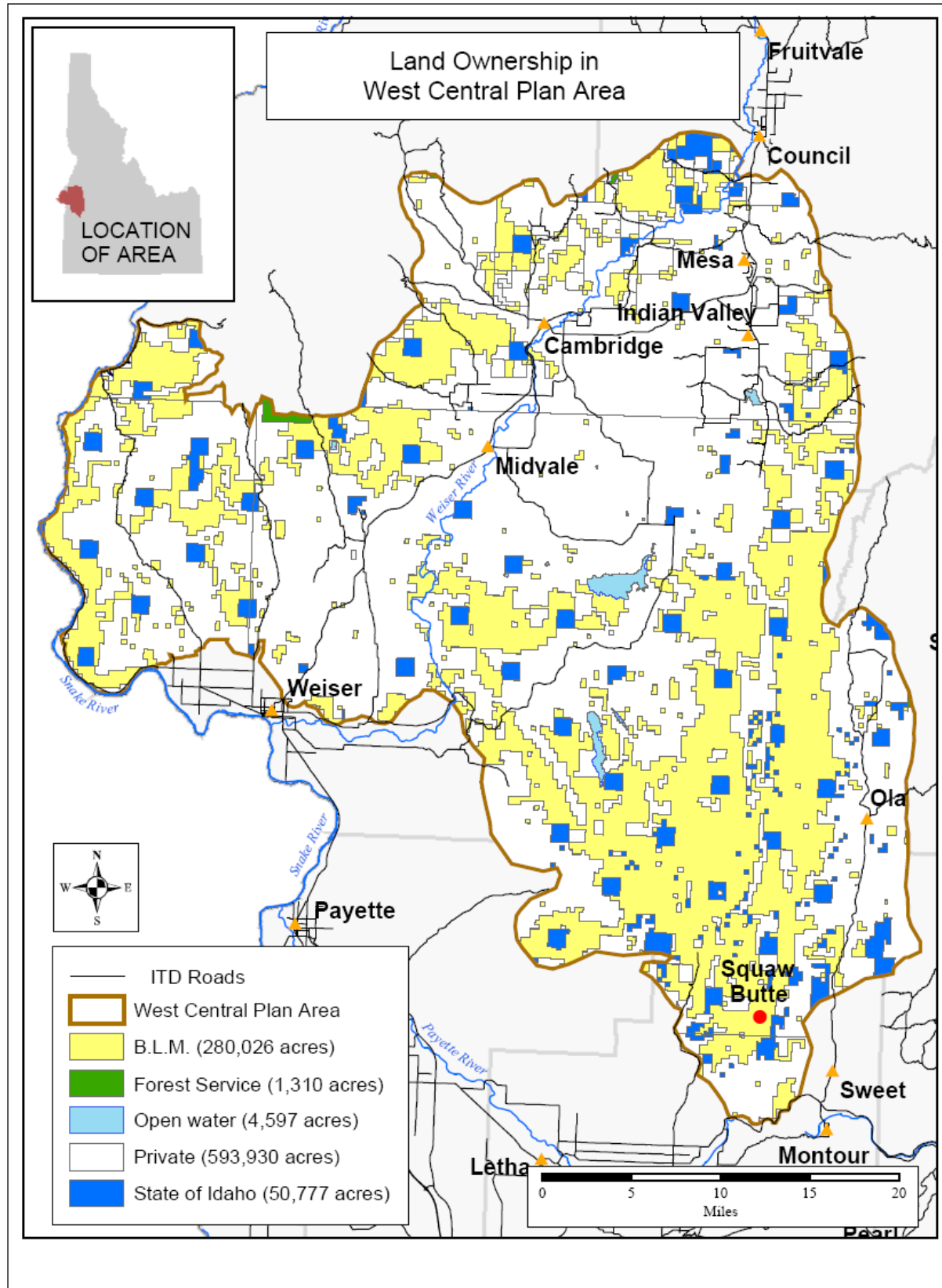


Figure 1. Location and land ownership of the West Central Planning Area (Source: Access Idaho GIS database).

II. Background and Description of Covered Area

With respect to sage-grouse populations and habitat, the WCPA is unique compared to other areas in Idaho in several respects: (1) populations are largely geographically isolated from all other known sage-grouse populations in Idaho and Oregon by either physical barriers such as wide areas that are no longer available as sage-grouse habitat or large distances to the nearest occupied habitats; (2) there has been no hunting season for sage-grouse for over twenty years; and (3) the area includes the largest proportion of private land of any other planning area in Idaho (Evans Mack and Commons-Kemner 2005). Thus, an effective conservation plan for this area must address the needs of sage-grouse while reflecting the unique characteristics of the planning area (Figure 1).

The description of the WCPA in the State Plan is brief. According to the State Plan:

The sage-grouse habitat within the West Central SGPA is about 875,000 acres in size. The Bureau of Land Management administers 32% of the sage-grouse habitat within the area, 62% is private, 6% is managed by the State, and less than 1% is administered by USDA Forest Service. Thirty-one percent of the area is classified as key sage-grouse habitat, 25% is dominated by perennial grassland, and 44% is classified as annual grassland. Much of the perennial grassland is dominated by native grasses with islands of sagebrush. A change in the classification from perennial grassland to key habitat may be appropriate for some portions of the SGPA, contingent on the extent of sagebrush cover, distribution of sagebrush islands or other factors. Field-level ground truthing of these areas in the near future is warranted because much of the native perennial grassland type does not need to be rehabilitated. The annual grassland type will need to be monitored for presence/absence of sage-grouse as some of the area may be unsuitable for rehabilitation to sagebrush habitat due to topography and terrain.

There are three refinements to this description that more accurately characterize the WCPA. First, there is some discrepancy in the size of the area and the ownership within it. The WCPA includes portions of Washington, Adams, Gem and Payette counties. Approximately 64 percent of the total acreage is privately owned. The BLM manages 30 percent, Idaho Department of Lands manages 5.5 percent as state endowment lands, and less than 1 percent is managed by the USDA, Forest Service (Table 1). The WCPA encompasses lands both east and west of Highway 95 from Weiser to Council and extends roughly from Council on the north to Squaw Butte on the south, and from the Snake River on the west to Ola on the east (Figure 1).

Table 1. Land ownership within the WCPA.

<u>Owner/Managing Agency</u>	<u>Acres</u>	<u>Percent</u>
Private	593,930	63.8
Bureau of Land Management	280,026	30.1
Forest Service	1,310	0.14
State Endowment Lands	50,777	5.5
Open Water	4,597	0.5
Total	930,640	100

Second, analysis of the “Shrubmap” (USGS 2005) data (Table 2) indicates variances with the estimates of annual and perennial grasslands included in the State Plan, 44% and 25% of the area, respectively. Shrubmap data suggest that only about 12% of the area (115,762 acres) is classified as annual grasses, with perhaps 19% classed as perennial grasslands. This is not to say that annual grasses, particularly medusahead, are not a problem. However, rather than massive, nearly pure stands of medusahead or cheatgrass that may be found elsewhere, stands of these annual grasses within the WCPA are smaller and limited to lower elevations or clay soils, although medusahead, particularly, is a common understory plant in shrub communities.

Table 2. Vegetative cover and land uses (USGS Shrubmap 2005 and GIS analysis, 2007)
(The discrepancy between total acreages in Table 2 and Table 1 is due to rounding errors in GIS calculations).

Major Vegetative Cover Types, Land Uses, West Central Planning Area		
Cover Types	Acres	% of WCPA
<i>Natural Vegetative Communities</i>		
Columbia Basin Foothill and Canyon Dry Grassland	25,642	2.8
Columbia Plateau Scabland Shrubland	59,115	6.3
Columbia Plateau Steppe and Grassland	176,456	18.9
Evergreen Forest	14,271	1.5
Inter-Mountain Basins Big Sagebrush Shrubland	129,696	13.9
Inter-Mountain Basins Big Sagebrush Steppe	157,815	16.9
Inter-Mountain Basins Montane Sagebrush Steppe	79,138	8.5
Riparian	32,209	3.5
Other	12,686	1.3
<i>Total</i>	<i>687,028</i>	<i>73.6</i>
<i>Land Uses, Altered Portions</i>		
Agriculture	114,666	12.3
Invasive Annual Grassland	115,762	12.4
Recently Burned	12,031	1.3
Other	1,783	0.2
<i>Total</i>	<i>244,242</i>	<i>26.2</i>
TOTAL	931,270	100.0

Finally, there is the issue of the area considered to be “key” sage-grouse habitat, defined in the State Plan as “areas of generally intact sagebrush that provide sage-grouse habitat during some

portion of the year” as identified through the expert opinions of various agency staffs. The WCLWG offers an additional delineation of important sage-grouse habitat within the WCPA by identifying the combination of relatively intact shrub-bunchgrass communities and areas actually used by sage-grouse throughout the year, as identified by the telemetry studies described elsewhere in this agreement. Figure 2 shows the Working Group’s delineation of areas of sage-grouse use based on leks, shrub cover and telemetry data that includes a larger area as a priority for sage-grouse management than that identified in the original assessment of “key” areas in the State Plan. However, the maps in the State Plan are periodically revised and subsequent versions are more closely aligned with the Working Group’s conclusions.

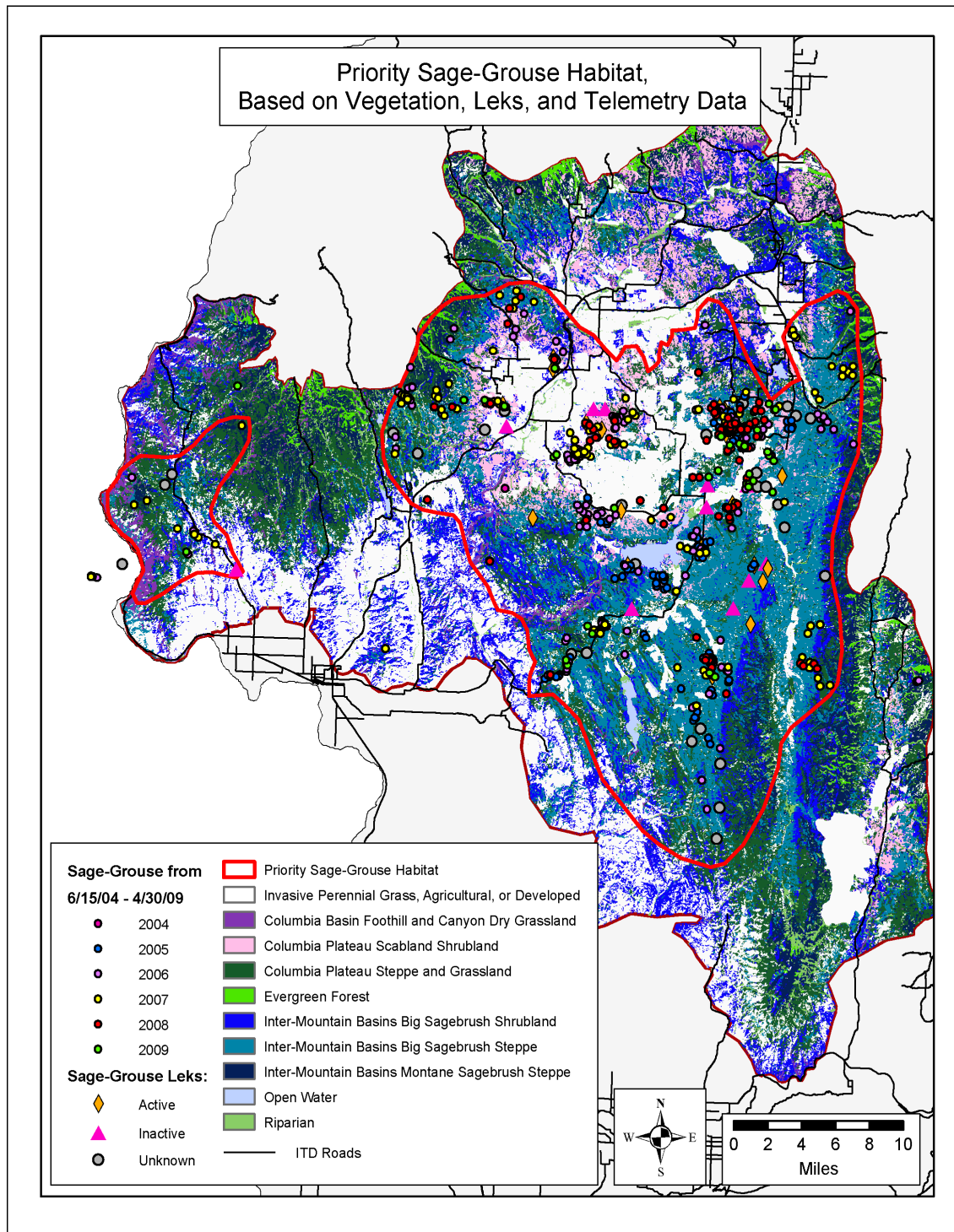


Figure 2. Priority sage-grouse habitats within the West Central Planning Area.

General Description

The WCPA is 930,640 acres. It is characterized by valley farmlands surrounded by extensive rolling hills of sagebrush-grassland and mountain foothills. The Covered Area for this Agreement includes the 930,640 acres, of which only the privately owned and state endowment lands (a total of 644,707 acres) are eligible for enrollment and assurances under this Agreement. Throughout this Agreement, the “Covered Area” may also be referred to as the “West Central Planning Area (WCPA).” Elevations range from about 2070 feet at the Snake River near Brownlee Reservoir to slightly over 4000 feet at Sugarloaf Peak and the southern Payette National Forest boundary. The greatest portion of the area and of occupied grouse habitat lies between 2500 feet and 3500 feet elevation. The climate is characterized by cold, wet winters and hot, dry summers. Mean annual precipitation is about 11 inches at lower elevations near Weiser but rises quickly with elevation to over 20 inches over much of the planning area. Only about 29 percent of annual precipitation falls in April through September. In two years out of ten, rainfall during this summer dry period is less than 5 inches (NRCS 2001).

Many of the native rangelands in the higher precipitation areas have improved in terms of cover, density and composition of native species with adjusted stocking rates and better management practices since perhaps the early 1950’s (S. Leonard, pers. comm.). However, bulbous bluegrass, an introduced species, still dominates the understory of shrub communities in many other areas. Cheatgrass and medusahead had already established in the lower precipitation areas, presumably from contamination of early wheat crops (J. Young, Agricultural Research Station pers. comm.), and the spread of these invasive, exotic annual grasses has limited the potential for re-establishment of many native species in those areas.

The dominant agricultural activity within the WCPA’s rangelands remains cow-calf beef operations. Ranches range in size from a few hundred deeded acres to several thousand acres per owner/operator. Many of these ranches remain in the hands of the families who originally homesteaded here in the late 1800’s. In addition to their deeded lands, a majority of ranchers utilize grazing allotments on public land, including BLM, Forest Service, and Idaho Department of Land (IDL). Cattle spend about half of each year on pasture or range and about half of the year on feed grounds. Depending on weather and forage, ranchers typically begin feeding hay in late November and continue to feed until grasses green up in the spring. Calving occurs from early February until April. Cattle move onto public lands grazing allotments at various times, depending on terms of the permit. Some permits allow early spring grazing in April and May. Others, particularly those at higher elevations or on Forest Service allotments, allow grazing after July 1st. Gathering cattle from public lands and returning to deeded range or pasture also varies according to permits and range conditions, but livestock typically are off public lands by early November. There are only two range sheep operations, with approximately 11,000 ewes in total. Generally, the sheep spend summers in the higher elevations, almost exclusively on national forest or state-owned lands.

The Sagebrush Steppe Community and Greater Sage-grouse Habitat within the WCPA

Greater sage-grouse are dependent on large areas of sagebrush/grassland habitats, but require different kinds of habitat within the sagebrush-steppe landscape for breeding, brood-rearing, and over-wintering. But sagebrush without a healthy perennial grass and forb understory will not suffice. Research has shown that perennial herbaceous cover is particularly important for sage-grouse reproduction (Barnett and Crawford 1994, Gregg et al. 1994, Gregg 2006). The availability of a diversity of forbs rich in calcium, phosphorus and protein is important to pre-laying hens, and herbaceous understory increases access to insects and forbs by hens before breeding and by chicks (Gregg et al. 1994, Gregg 2006). Herbaceous understory also provides cover to hide nests, eggs and chicks from predators. Idaho's State Plan provides guidance for shrub and grass-forb cover values which constitute suitable habitat for the bird's life cycles, as shown in Table 3.

Table 3. Characteristics of sagebrush rangeland needed for productive sage-grouse habitat (Connelly et al. 2000).

	<u>Breeding</u>		<u>Brood-rearing</u>		<u>Winter</u>	
	Height (cm)	Canopy (%)	Height (cm)	Canopy (%)	Height (cm)	Canopy (%)
Mesic sites						
Sagebrush	40-80	15-25	40-80	10-25	25-35	10-30
Grass-forb	>18	≥25	variable	>15	N/A	N/A
Arid sites						
Sagebrush	30-80	15-25	40-80	10-25	25-35	10-30
Grass-forb	>18	≥15	variable	>15	N/A	N/A
Area ¹	>80		>40		>80	

¹Percentage of seasonal habitat needed with indicated conditions.

Despite over a century of settlement accompanied by conversions of both land uses and cover types, approximately 74% of the WCPA remains in rangeland habitat, although some of these types are not suitable for sage-grouse. There have been incursions of invasive annual grasses within some of these communities, but those have been limited to either relatively small areas over much of the planning area or as understory plants within a native shrub community. An exception is the lower elevation southern-most portion of the area, where larger incursions of annual grasses can be found. On an overall basis, about 46% of the WCPA is currently potentially suitable for sage-grouse. Table 2 summarizes the acreage of vegetative cover types and land uses within the WCPA, while Figure 2 illustrates the distribution of these cover classes.

A preponderance of rangeland soils within the area can produce an overstory of sagebrush, or bitterbrush mixed with sagebrush, with a substantial understory of grass and some forbs. Xeric big sagebrush, a xeric form of mountain big sagebrush and thought to be a cross between basin big sagebrush and mountain big sagebrush, is by far the most common and extensive sagebrush type in the WCPA, and is endemic to this area (Rosentreter and Kelsey 1991; Leonard, pers comm. 2008). Bluebunch wheatgrass dominates the understory in terms of potential production but has been severely reduced in much of the area from early (and in some places continuing) improper grazing practices (NRCS 2001), often being replaced by medusahead rye or bulbous bluegrass.

Low sagebrush and stiff sagebrush sites are interspersed with xeric big sagebrush sites throughout much of the area. Low sagebrush is associated with shallow soils while stiff sagebrush is associated with very shallow soils. Stiff sagebrush sites are extremely low producing in annual biomass, generally with a sparse understory of Sandberg bluegrass and forbs. Soil saturation during the early spring, followed quickly by complete drying, lends to low overall productivity, but these sites often have a high composition of early season forbs. Low sagebrush sites also tend to produce a higher composition of early season forbs for the same reasons as on stiff sagebrush sites, but they also support the larger bunchgrasses like bluebunch wheatgrass.

Basin big sagebrush sites with a potential understory of basin wildrye or bluebunch wheatgrass are also interspersed in the more extensive xeric big sagebrush communities, occurring on deep soils of valley bottoms and stream terraces or “run-in” sites that receive additional moisture from overland flow. Mountain big sagebrush with a potential understory of bluebunch wheatgrass and Idaho fescue occurs in a limited extent at higher elevations, usually above 5,000 feet. Few, if any, Wyoming big sagebrush sites occur in the planning area.

Big sagebrush sites are dynamic by nature, with fire, drought, insects, disease and grazing pressure all affecting this ever-changing mosaic. With fire, particularly, as the dominant disturbance factor, there are predictable changes. First, forbs may increase, along with fire-tolerant shrubs such as rabbitbrush and residual grasses in the first growing season after the burn. These predominately herbaceous communities are highly productive in terms of biomass for a short time. Over time, forbs give way to increasing perennial grass production, while the forb component diminishes. Ultimately, the establishment and growth of big sagebrush from seed and the recovery of other more fire-intolerant native shrubs results in shrubs returning to site dominance. These shrubs may shade out many remaining forbs and some of the grasses as the shrubs grow in age and size. This vegetative community will remain in place until the next fire or other disturbance event renews the process. Depending on the type of sagebrush and the burn conditions this process may take from 25 to 75+ years.

The LandFire models (The Nature Conservancy et al. 2005) help to quantify the natural range of variability in vegetation composition and structure. They combine three generic developmental stages (early, mid, late) with two canopy cover classes (open and closed). Each class is specifically defined for individual habitat types based on such factors as fire frequency and severity, the probability of other disturbances, and the rate of vegetation growth, which were derived from literature review and expert input during and after modeling workshops. Models simulate several centuries of vegetation dynamics and produce outputs such as the percent of the

landscape in each class and the frequency of disturbances. Thus, LandFire describes the vegetation communities that are likely to exist under the natural range of variability and within the range of past climates to provide some insight into the developmental stages that each cover type could be expected to exhibit under pre-settlement conditions. As such, the models can help determine which developmental stages need to increase or decrease in order to achieve some approximation of conditions as they might naturally occur across the landscape.

Within the West Central Planning Area, LandFire identifies four potential natural vegetative groups: basin big sagebrush, mountain big sagebrush, Wyoming sagebrush and low sagebrush. In addition, the Local Working Group identified two others as important components of the planning area, xeric big sagebrush and stiff sagebrush, that are not specifically identified in the LandFire models and for which the Working Group estimated cover values. The description of each of these groups, the percentage of the dominant species for each group and the percent of the area that would be covered for each developmental stage are summarized in Table 4.

Table 4. Expected developmental stages and sagebrush cover for the WCPA from LandFire models (The Nature Conservancy et al. 2005) and West Central Sage-Grouse Local Working Group estimates.

Potential Vegetative Groups and Expected Developmental Stages							
		Percent Area/Sagebrush Cover					
		Early Development		Mid Development		Late Development	
Source	Potential Natural Vegetation Group	Percent Area	Percent Cover	Percent Area	Percent Cover	Percent Area	Percent Cover
LANDFIRE Models	Basin Big Sage	15	0-15	70	16-25	15	26-50
	Mountain Big Sage	20	0-5	45	6-25	35	26-45
	Wyoming Sage	20	0-5	50	6-25	30	26-35
	Low Sage	10	0-5	70	6-10	20	11-20
Local Working Group Est.	Xeric Big Sage (est.)	15-20	0-5	45	6-25	35	26-45
	Stiff Sage (est.)	10	0-5	70	6-10	20	11-20

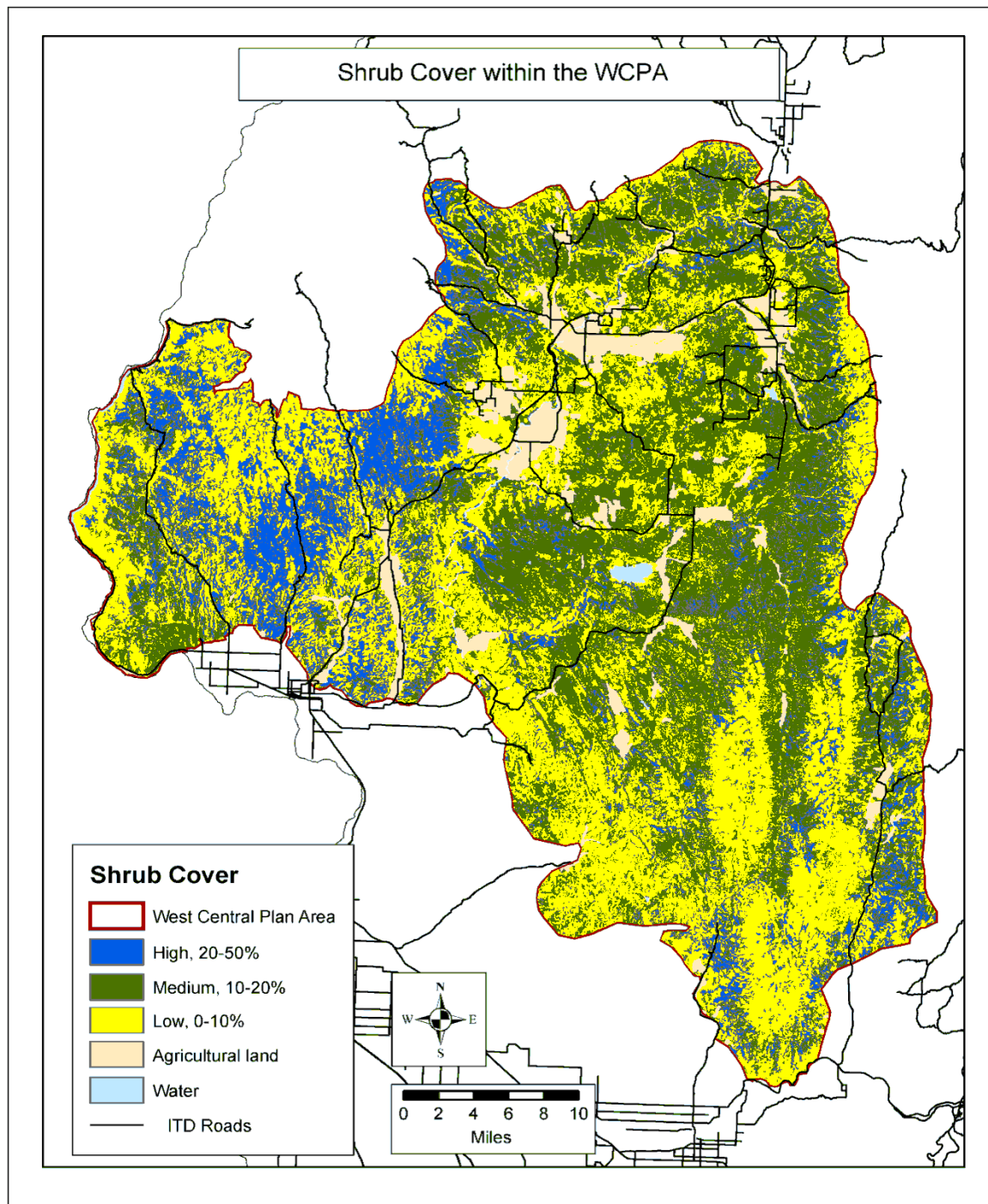


Figure 3. Shrub cover based on ENVI Analysis of NAIP and Landsat Imagery (E. Strand, University of Idaho, pers. comm. 2007).

III. Status of the Species

Sage-grouse Biology and Status within the WCPA

Greater sage-grouse currently occur in eleven western states and two Canadian provinces (Schroeder et al. 2004). Throughout most of its range, the species is found at elevations ranging from 4,000 to over 9,000 feet. However, in the WCPA, the greatest portion of occupied grouse habitat appears to lie between 2,500 and 3,500 feet. The greater sage-grouse has historically been and continues to be an important species across the western rangelands, as well as an important part of the sagebrush community that is sometimes used as a measure of sagebrush ecosystem health (Connelly et al. 2004).²



Even though greater sage-grouse have been monitored in Idaho since the 1950s, data on historical populations of sage-grouse in some areas of Idaho are not well documented. Prior to 1900, when the first sage-grouse hunting season was established in Idaho, sage-grouse were not protected. As early as the 1920s, wildlife managers voiced concern about the future of Idaho's sage-grouse populations. In a trend mirroring that seen in other western states, Idaho has experienced substantial alteration and losses of sagebrush steppe habitat since European settlement (Idaho Sage-grouse Advisory Committee 2006). Overall, from 1965-2003, Idaho's sage-grouse population declined at an average rate of 1.47 percent per year (Connelly et al. 2004). The most dramatic decline occurred during 1965-1984, when the sage-grouse population declined by an average rate of 3.04 percent per year. Between 1985 and 2003, the average decline slowed to 0.12 percent annually. In general, Idaho sage-grouse numbers reached a low in the mid 1990's but have increased since that time (Connelly et al. 2004).

Three types of seasonal movement patterns have been described for greater sage-grouse: (1) non-migratory: grouse do not make long distance movements [e.g., >10 km (6 mi) one way]; (2) one-stage migratory: grouse move between two distinct seasonal ranges; and (3) two-stage migratory: grouse move among three distinct seasonal ranges (Connelly et al. 2000). Monitoring of radio-collared birds shows that sage-grouse in the WCPA exhibit all three types of migratory patterns, but most exhibited 1-stage migratory patterns, moving between 2 distinct seasonal ranges (Commons Kemner and Gray 2008, Gray and Evans-Mack 2009).

² A more detailed discussion of sage-grouse biology is to be found in the Idaho Sage-grouse Advisory Committee's "Conservation Plan for the Greater Sage-grouse in Idaho" (2006) (State Plan). However, there are major points to be noted in the WCPA agreement which highlight important considerations for the area.

During early March to mid-May, male sage-grouse gather at display grounds called leks. Using elaborate plumage displays and inflatable air sacs that produce a loud plopping sound, males attract females and protect their territory on the lek from other males. Leks are usually located on bare areas adjacent to stands of sagebrush. Many leks in the WCPA are found on old homestead sites and current livestock winter feeding areas. Most males and females remain within a mile of the leks during mating activities (Schroeder et al. 1999). Cocks



establish territories on traditional strutting grounds in late February and early March, assembling on grounds an hour or so before dawn and strutting into the morning. Lek activity is greatest at the peak of hen attendance (last week of March in WCPA). The strutting display of sage-grouse has been described in detail by Scott (1942), Lumsden (1968), Wiley (1970) and Hartzler (1972).

Historic population data on sage-grouse in the WCPA are limited. Lek counts for the WCPA during the late-1960s through the late-1990s were sporadic. In addition, there has been no sage-grouse hunting season in the WCPA for more than twenty years. Consequently, production data from hunters are also lacking.

Intensive surveys of active, historical and potential leks were conducted between 1998 and 2001. Displaying males were observed at 19 leks but no birds were observed at 42 historic lek sites. To gain a better understanding of population trend, four lek routes were established by the Idaho Department of Fish and Game in the late 1990s that provide data on 14 leks. A lek route is an established route among a number of known leks in close enough proximity that they can be observed by one observer traveling between leks in a single morning. Trained volunteers and IDFG staff monitor these lek routes on a regular basis using a prescribed protocol for counting the number of birds on each lek during the spring mating season. While data inconsistencies and the limited number of lek counts do not allow for definitive conclusions as to trends in the data for the WCPA, the population today appears to be significantly smaller than in the 1970s, based on the number of historic leks that are now unoccupied and the low average number of males per lek (Figure 4) (IDFG, unpublished data).

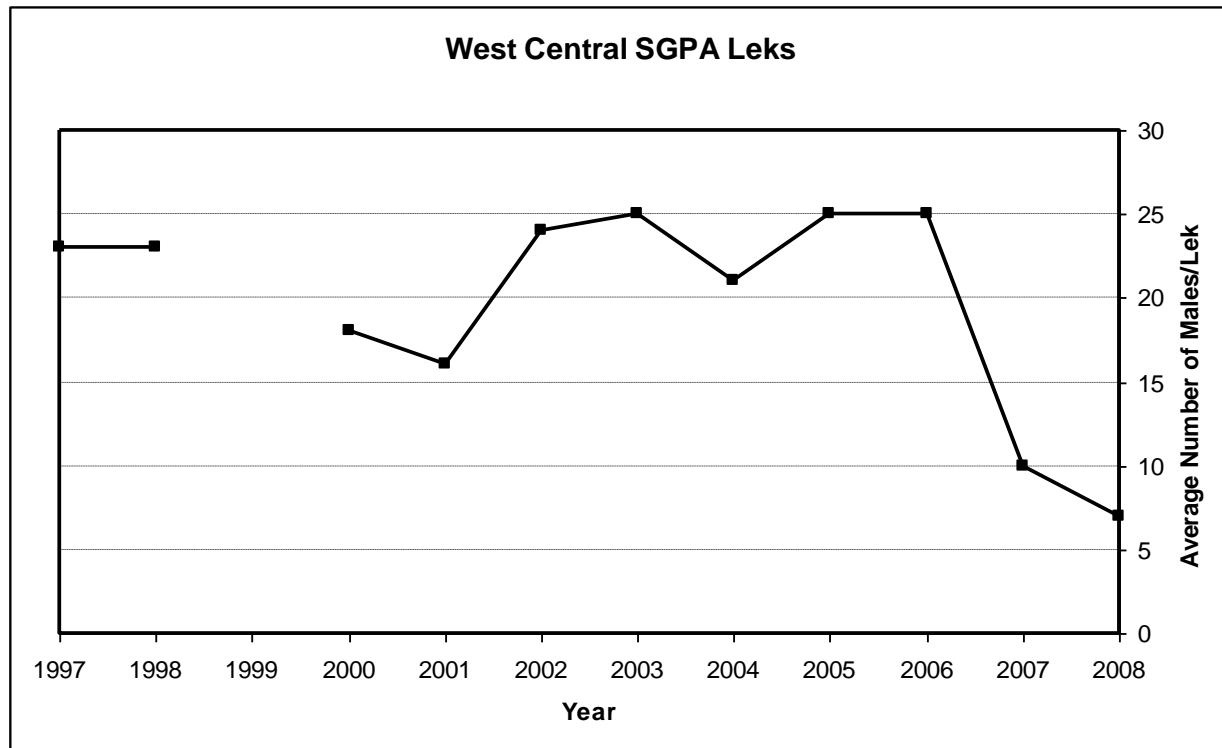


Figure 4. Average number of male sage-grouse per lek from 1997 through 2008 in the West Central Planning Area (Idaho Sage-grouse Advisory Committee 2006 and IDFG unpublished data).

Sage-grouse Telemetry Study

A lack of detailed information on lek data, distribution, habitat use, and numbers in the WCPA hampered the Local Working Group's ability to determine effective conservation measures. Specifically, the LWG needed to identify threats and opportunities to initiate habitat enhancements on the ground. Property owners active in the LWG expressed a strong desire to see baseline information established from which to evaluate progress in improving habitat or sustaining populations. The purpose of this project was to identify seasonal habitat use, movements, and vital rates of sage-grouse in west central Idaho.

There are several key pieces of information to be gleaned from this study. First, the data show the general areas which are preferred by sage-grouse throughout the year. Second, we have some understanding of the distances that the birds commonly travel during the year. Finally, the data provide a basis for additional inquiries of habitat preferences by associating telemetry points with such variables as slope, aspect, shrub cover, vegetation type, elevation and season. There is currently a proposal for a master's project by a



University of Idaho graduate student that would explore the interactions of these habitat parameters.

Implications for Sage-grouse Management

The combination of physical factors, land uses and historic land management has inevitably resulted in areas that have greater value for sage-grouse than others. It is possible to identify potential nesting areas through Geographic Information System (GIS) analysis. Figure 5 shows the intersection of known sage-grouse leks and medium to high shrub cover within two-miles of those leks. Early studies indicated that hens typically nested within two miles of a lek; however, a recent compilation of studies reports much higher distances (Connelly et al., in press)

Therefore, given the state of existing knowledge for the area, it is probably safe to assume that the nesting habitat circles indicated on the map in Figure 5 should represent the *minimum* amount of nesting habitat within the WCPA. In addition, there may be important areas of unoccupied habitat.

The combination of known lek locations and yearlong telemetry data identifying breeding, brood-rearing, and wintering habitats allows for the identification of important use areas. Such areas depict present conditions, but do not identify areas where land uses or historic events have reduced habitat values so that they are no longer frequently used by sage-grouse. However, their inherent physical factors and proximity to currently used areas may make them candidates for restoration efforts that could recreate more favorable habitat conditions. Figure 2 depicts currently known use areas within the West Central Planning Area.

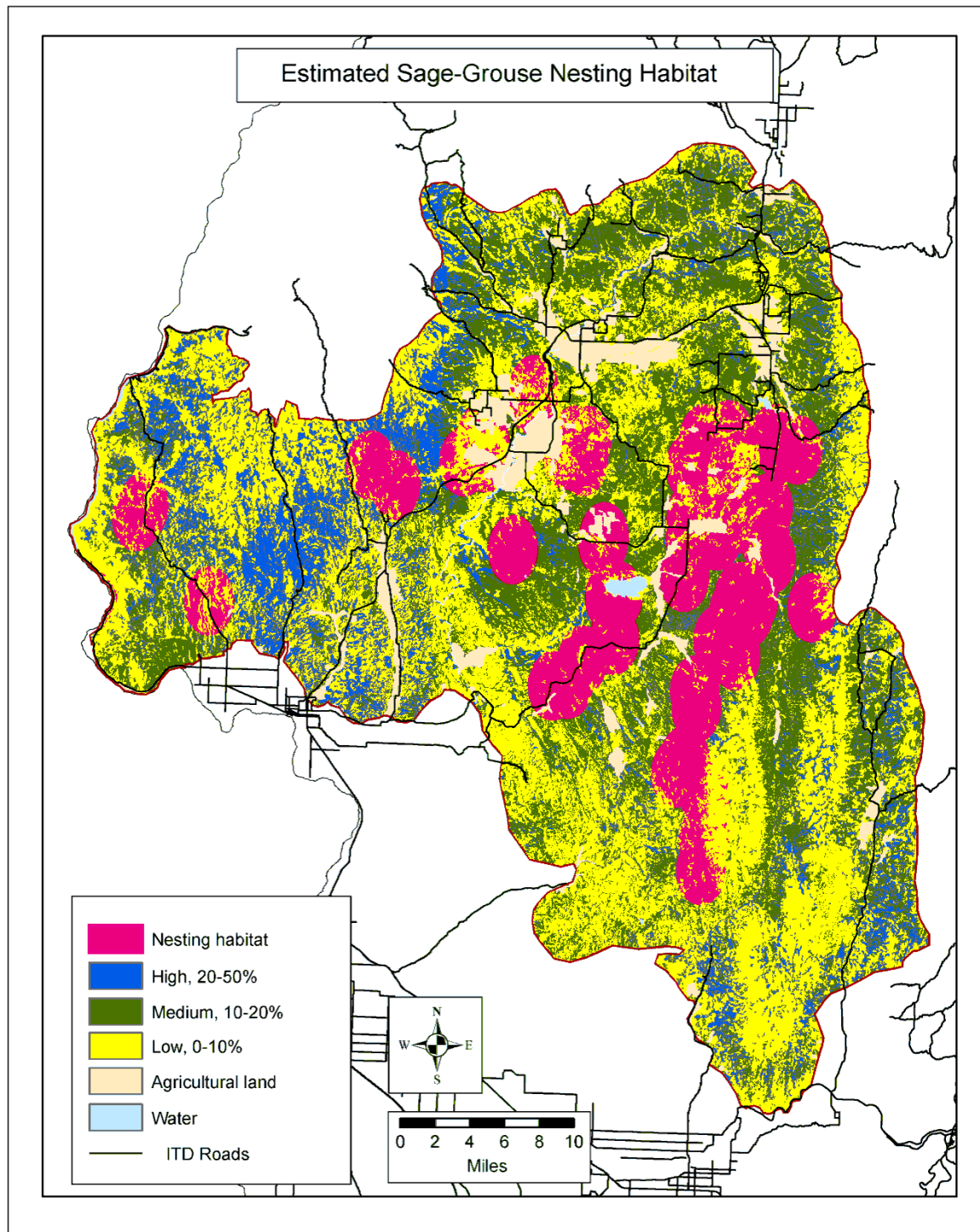


Figure 5. Estimated minimum amount of sage-grouse nesting habitat, based on 2-mile lek buffers joined with “high” or “medium” shrub cover through GIS analysis

IV. Threats, Conservation Measures, and Expected Benefits

Statewide Perspective

To help better understand declining sage-grouse trends in Idaho, the Idaho Sage-Grouse Science Panel met in February 2005 to identify threats to sage-grouse across the state. This group prioritized the 19 statewide threats, including (1) wildfire, (2) infrastructure, and (3) annual grasslands. Wildfire ranked highest due to potentially large-scale impacts to already reduced habitat, its link with expanding annual grasslands, climate change and drought, and length of recovery times. Annual grass dominance and infrastructure development also ranked high, as these factors can constitute essentially irretrievable losses of habitat. Infrastructure threats to the species also include past and current activities such as rural and suburban development, road and highway development, and utility structures. Livestock impacts ranked fourth in relative magnitude, with the relatively high ranking partly because of the widespread extent of this factor on the landscape. It was also noted that proper livestock management can provide habitat supportive of sage-grouse, and that if grazing unfavorably impacts habitat conditions or poses a threat to the security of nests or broods, livestock management practices can be adjusted to minimize negative impacts.

The panel also identified specific geographic areas in Idaho and the relative likelihood of sage-grouse extirpation within them, assuming status-quo management and continued trends and trajectories of habitats, populations and threats. The West Central Planning Area ranked first in terms of sage-grouse extirpation risk, due to its isolated population, high proportion of private property, low sage-grouse population numbers, large amount of annual grasslands, and lack of connectivity with other sage-grouse populations. The panel felt sage-grouse populations in the WCPA could be extirpated within 25-50 years without active conservation efforts.

West Central Planning Area Perspective on Threats

Sixteen of the 19 statewide threats to sage-grouse are relevant in the WCPA (see descriptions below). Some of these threats can be addressed at an individual property owner level, and some cannot. Therefore, one of the major purposes of this programmatic agreement is to identify the threats and corresponding conservation measures from the State Plan into those actions that are effectively addressed through site-specific plans for individual enrolled property owners. As a first step in identifying specific actions to reduce unfavorable impacts to sage-grouse and increase their survivability, the Working Group has identified desired future conditions for the entire area that, if achieved, would assure a stable, adequate and healthy population of sage-grouse in the WCPA, even without this Agreement. The elements of this condition include the following:

- A landscape where the mixture of vegetative cover approximates the early, mid and late stages of grass-forb-shrub development that the LandFire models indicate as likely for our habitat types (Table 4).
- Habitat that is largely intact, where future intrusions by roads and human alterations of current land uses are minimized.

- “Connected” habitat where important “patches” are connected to other important patches and where particular attention is given to those activities which might disrupt that connectivity.
- Secure habitat in which any physical impacts to birds are minimized.

In addition, new research shows that ensuring the persistence of sage-grouse populations requires maintaining large landscapes that are relatively unfragmented and predominately covered with sagebrush. The amount of area with sagebrush cover was the “single-best discriminator between occupied and extirpated ranges” of sage-grouse, and landscapes with 50% or more of the area occupied by sagebrush cover types had a high probability of supporting persistent populations (Aldridge et al. 2008, p. 990; Wisdom et al., in press, p. 17).

Defining a set of future conditions that should result in stable and adequate populations of sage-grouse allows the identification of barriers and threats to achieving those conditions within the planning area. Sixteen³ of these threats are relevant to the planning area and can be reduced through management actions at the planning group level or by individual property owners. The threat categories are the same as in the State Plan; however, the specific manifestation of the threats is described here in the context of the WCPA in which they may occur.

1. Fire: Wildfire that threatens a desirable grass-forb-shrub mixture and which promotes the expansion of annual grasses.
2. Infrastructure: Infrastructure, including major roads, power transmission lines, cell and wind towers or land easements/rights-of-way for powerlines or other large infrastructure that disrupts habitat connectivity or unacceptably alters the birds’ life cycles.
3. Annual Grassland: Increases the potential for fire which, in turn, allows for the expansion of annual grasslands.
4. Livestock Impacts: Improperly managed livestock grazing that prevents the achievement of a desirable grass-forb-shrub mixture or which disrupts life cycles of the birds, and associated infrastructure (e.g., fences, corrals, and buildings) that converts or makes previous habitat unusable.
5. Human Disturbance: Not deemed a significant threat in WCPA, but isolated incidents associated with recreation or other human uses may deserve attention.
6. West Nile Virus: Could potentially be a threat in the WCPA as cases have been recorded.
7. Prescribed Fire: Although infrequently used in WCPA, escaped burns could destroy important sagebrush habitats.

³ “Conifer encroachment,” “Mines and gravel pits,” and “Falconry” were also identified as threats in the State Plan but deemed not relevant for the WCPA.

8. Seeded Perennial Grassland: Potential modifications of grass-forb-shrub mixtures through plantings of exotic species or modifications to existing native cover types.
9. Climate Change: Over time, warmer temperatures could increase fires and the proliferation of annual grasses into sagebrush habitats.
10. Isolated Population: Reduced survival fitness of the population as a result of reduced genetic diversity.
11. Predation: Predation where levels of prey/predators are out of balance or where limited patch size, habitat security, or human activities increase predation levels.
12. Development: Urban or exurban development, residential development and associated infrastructure (e.g., outbuilding, corrals, driveways, power lines) that threatens habitat availability, connectivity or reduces the size of habitat patches, or habitat security.
13. Sagebrush Control: Loss of additional sagebrush habitat suitable for sage-grouse occupancy.
14. Insecticides: Improper use of insecticides, particularly during the period in which sage-grouse chicks are heavily dependent upon insects as a food source.
15. Agricultural Expansion: Clearing sagebrush to make additional arable lands reduces habitat.
16. Sport Hunting: Poaching or accidental shooting.

These sixteen “threats” or barriers to a desired future condition for the WCPA become the basis for the conservation measures that are included in both this programmatic CCAA and could be part of individual agreements, if appropriate on their property. The menu of conservation measures included in this Agreement and that could be implemented by the enrolled property owners are designed to meet the CCAA standard by removing or reducing threats to the species, including habitat conditions that fail to meet minimum criteria.

IDFG recognizes that some of the conservation needs of sage-grouse in the WCPA occur at a spatial scale larger than most individual property owners can control. Some of these conservation activities may occur through the efforts of the WCLWG, IDFG, or others. For example, during the development of this Agreement, it became apparent that several proposed rural subdivisions could unfavorably impact sage-grouse habitat. Consequently, the Local Working Group worked with county planning and zoning authorities who have incorporated sage-grouse habitat into their decisions. This was a collective effort that is beyond the ability of a single property owner to achieve as part of their individual conservation measures.

It is equally important to note that simply maintaining landscapes where there are already relatively large populations of grouse is, in itself, a conservation action, and entirely consistent with the guidance found in the draft CCAA Handbook (page 63 “*Existing Situation Meets the*

CCAA Standard”). The LWG recognizes that one of the major barriers to achieving a desired future condition in the planning area is development, particularly actions which purposefully change existing land uses from farms and ranches to residential, commercial or recreational sites. Such changes must be viewed as permanent and preemptive of all habitat conditions that are vital to sage-grouse. While it might be argued that such traditional uses of rural lands as farming and ranching might diminish the value of grouse habitat, those uses seldom extinguish it, assuming rangelands remain as such and are not cleared for row crop production. While large areas of rangelands and shrub communities have been converted to dry farming or intensive row crop agriculture in the past, additional conversions seem unlikely in the WCPA, given that the remaining rangeland has limited suitable soils or access to irrigation water.

Conservation Measures

Table 5 identifies the linkage among threats, potential conservation measures, and expected benefits to the sage-grouse. It also provides indications of how each threat might be manifested within the WCPA. For example, the threat of poor grazing practices might be indicated by a failure to achieve adequate cover and height of grasses and forbs within medium and high shrub cover during the nesting season, when those conditions are being met on similar sites in a given year. It is important to note that not all threats and conservation measures to address them can be isolated to individual land ownerships. For example, an individual property owner may have a role to play in reducing exurban development, perhaps through an agreement to refrain from developing portions of his/her land, but the limit of his/her ability to address the threat is limited to his/her particular ownership.

This table presents the possible array of conservation measures that should be considered by individual property owners as they develop their site-specific plan that will be necessary for a certificate of inclusion to be issued. The actions they choose will be a function of threats which exist on their property, the habitat conditions, and the actions they will take that will adequately address threats and meet habitat objectives. It is, therefore, a menu of possible actions, not a mandate that all property owners must incorporate each action in the table in their site-specific plan. The specific conservation measures that will be required on any specific property will be a function of the threats to sage-grouse present on that property. For every threat that is identified by the Agencies on a particular property through the initial habitat assessment process (either across the property or within certain pastures), the property owner will be required to implement or cooperate in the implementation of conservation measures identified in the table below to reduce or eliminate the threat and conserve sage-grouse and their habitat.

While the programmatic CCAA must meet the CCAA standard under Section 10 of the ESA, each site specific plan must result in a minimum amount of conservation in order to meet the terms of the programmatic CCAA. As is mentioned above, landscapes with 50% or more area occupied by sagebrush cover types are an important indicator that the area will continue to support persistent populations of sage-grouse (Aldridge et al. 2008, p. 990; Wisdom et al., in press, p. 17). To provide adequate sagebrush cover for viable populations of sage-grouse in the WCPA, conservation efforts need to account for the current lack of sagebrush cover and anticipate future losses that may occur through the “life” (30 years) of the Programmatic CCAA. Factors likely to account for the greatest loss of sagebrush cover in the WCPA are wildfire and

exurban development. Landowners who are interested in enrolling under the Programmatic CCAA will need to agree to contribute to increasing and maintaining adequate amounts of sagebrush cover on their enrolled land and ultimately in the WCPA.

Recognizing that landowners applying for enrollment will have varying amounts of sagebrush on their land, a Fair Share Model was developed to account for these differences and to ensure equitable application of the CCAA Standard across all potential enrollees' properties (see Appendix C). The Fair Share Model also ensures that habitat losses projected over time are accounted for, and habitat available to sage-grouse in the WCPA will be sufficient to meet the CCAA standard. Application of the Fair Share Model to each specific property will identify an objective minimum amount of sagebrush habitat. For those properties that do not meet the Fair Share, the landowner must agree to restore sagebrush to as many acres as necessary to reach the Fair Share. Areas for restoration will be mutually agreed upon by the landowner and the Agencies, and restoration may be accomplished by either seeding/planting (active restoration) or by implementing grazing practices and fire prevention measures to allow the natural reestablishment of sagebrush to occur (passive restoration) during the term of their certificate of inclusion. Although the Fair Share Model was designed to determine the *minimum* amount of sagebrush habitat required for enrollment, a landowner may agree to additional habitat restoration and conservation efforts beyond the Fair Share. Under the Agreement landowners will not intentionally convert sage-grouse habitats to unsuitable habitat unless agreed upon by the Agencies as an option to improve sage-grouse habitat over the long term; thus we consider this a "no net-loss" Agreement.

Table 5. Summary of threats, conservation measures and expected benefits.

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Wildfire			
Altered fuels and fire regimes.	Extensive areas lacking sagebrush cover and dominated by cheatgrass, medusa, or bulbous bluegrass understories.	Following wildfire participate in restoration/rehabilitation of annual/biennial grassland habitat to healthy sagebrush steppe, rangeland where feasible, practicable, and adequate funding is available.	Increase the amount of suitable sage-grouse habitat.
Reduction or modification of habitat.	Known ignition threats such as proximity to roads or areas of high public use.	With proper training and the concurrence of fire officials, actively assist with the suppression of wildfire in existing or potential sage-grouse habitats.	Reduce the frequency of fire to maintain existing sagebrush habitats and allow early seral habitat to become mid seral habitat, which is limiting in the WCPA.
		On at least an annual basis, instruct family members, employees, and guests on the importance of fire prevention and fire prevention practices.	
		Where needed and appropriate, as determined by the Parties, install firebreaks or greenstrips to "buffer" existing intact or occupied habitat.	Maintain key sagebrush sites as breeding, brood-rearing and winter habitat.
Restoration and burned area rehabilitation.	Extensive wildfires where natural revegetation of desirable native species is unlikely.	Following wildfires of at least 100 acres consult with the Agencies and others on the need for rehabilitation to healthy sagebrush habitat. When rehabilitation is advisable and feasible and when adequate funding is available, native shrubs, grasses and forbs will be considered first and incorporated into seed mixes where feasible, practicable, and adequate funding is available. Provide for at least one growing season of rest from grazing following fire and at least two growing seasons of rest following seeding unless the Parties agree to another approach.	Facilitate rapid recovery of vegetative types that provide suitable sage-grouse habitat.
			Help assure the success of post-fire recovery.
Infrastructure			
Infrastructure, including major roads, transmission lines, wind and cell towers, airports, geothermal plants, and other major works, easements/rights-of-way for large infrastructure.	A matrix of power lines, roads, towers, and other infrastructure that disrupts habitat connectivity or unacceptably alters the birds' live cycle.	When needed, in cooperation with the Local Working Group, advocate to the County Commission that the maintenance or construction of major infrastructure (e.g. highways, transmission lines, wind towers) adhere to the recommendations outlined within the Idaho State Sage-Grouse Conservation Plan.	Reduce the direct physical disturbance to sage-grouse during breeding and nesting.
		Do not construct or allow the construction of commercial wind or cell towers on enrolled properties. Ensure that geothermal or natural gas development does not adversely affect sage-grouse by consulting IDFG and receiving written acknowledgement that any plans will not adversely affect the species.	Reduce physical threats and disturbance by avoidance of impacts of power lines and public works.

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Annual Grasslands			
Annual grasses that contribute fire hazards and which threaten sagebrush cover.	Relatively large areas of existing annual grass or areas which are spreading and threaten to displace native range.	See Wildfire Section above. All actions regarding fire prevention, suppression, and rehabilitation of burned areas are applicable.	Maintenance and restoration of native shrub types as suitable breeding, brood-rearing, and/or wintering habitat. Increase the extent of shrub communities through rehabilitation and restoration of annual grass areas.
Livestock Impacts Including Incidental Mortality from Ranch Operations			
Livestock management and rangeland health.	Shrub cover, grass and forb composition that shows significant departure from BLM's Rangeland Health standards and sage-grouse habitat guidelines.	Implement grazing management practices to achieve sage-grouse habitat guidelines. This may be accomplished by site-specific modifications to grazing timing, location, duration, number and/or types of livestock.	A proper mix of development stages within the shrub communities, coupled with adequate grass and forb cover during nesting and brood-rearing.
			Increased availability of sagebrush stands for nesting habitat .
Livestock management and herbaceous plant canopy cover.	Nesting habitat lacking or deficient in herbaceous cover.	Implement grazing management practices to provide adequate herbaceous cover during the breeding/nesting and brood-rearing seasons. This may be accomplished by site-specific modifications to grazing timing, location, duration, and number/types of livestock.	Improved nesting success and chick production.
Livestock management and leks.	Birds frequently leave or abandon leks.	Within 0.6 miles of an active lek avoid the use of machinery or other disturbance factors between 6 pm and 9 am from March 15 - May 1 except for usual and customary feeding and livestock care operations.	Reduced disruptions to breeding activity.
		Only herd (actively moving 25 or more animals) livestock through leks between 6 pm and 9 am from March 15 - May 1 when there are no other options available.	
Livestock management and late brood-rearing habitat.	Riparian and meadow areas that are excessively utilized and devoid of expected native vegetation	Manage cattle use to disperse livestock from riparian and meadow areas by herding, placing salt or supplements, developing alternative water sources, fencing, or changing the timing of grazing.	Improved brood-rearing habitat and brood survival.
		Manage sheep use to promote light, once over use of vegetation.	

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Livestock management during periods of drought.	Damage to native herbaceous plants and reduced food/cover in breeding and brood-rearing habitat.	Work with NRCS and IDFG to develop and implement a plan that addresses livestock management during severe drought. Also see "unforeseen circumstances" section below.	Minimize potential reduction in sage-grouse productivity and survival.
Placement of salt and mineral supplements.	Areas of heavily impacted vegetation due to livestock concentrations.	Place salt or mineral supplements in existing disturbed sites, areas with reduced sagebrush cover, seedings or cheatgrass sites to reduce impacts to sage-grouse breeding and brood-rearing habitat. Within the limitation of the pasture configuration, place salt or supplement beyond 1/4 mile of riparian/meadow habitats.	Avoid increasing the amount of heavily impacted areas.
Placement of fences and other livestock structures.	An observed or expected pattern of sage-grouse mortality from flying into existing or new fences.	Avoid construction of new fences and other livestock facilities (corrals, loading chutes, water tanks, windmills, etc.) within 0.5 miles of active leks. Modify the location of existing fences (subject to available funding) or improve visibility of existing fences if there is a documented and persistent problem with collisions.	Correct existing adverse impacts from problem fences and structures, and avoid new hazards.
Design and placement of water developments.	Increased mortality from trough drowning, reduced meadow and brood-rearing habitat, decreased quality of breeding habitat.	Maintain wet spring areas by designing new spring developments and/or retrofitting existing developments to allow for meadow vegetation to be sustained at the springhead or below the trough. Fence the wet area if needed to maintain brood-rearing habitat guidelines.	Maintain availability of existing brood-rearing habitat.
		Fit existing and new water troughs with wildlife escape ramps.	
		Consult with IDFG on any proposed location and design of new water developments.	Avoid creating new conflicts or damaging critical sage-grouse habitat.
Management of livestock during restoration efforts.	Newly seeded rangeland.	See conservation measures under Fire, above.	Increase the success and reduce the time for successful establishment of new plantings.
Incidental mortality associated with ranch operations.	Observed mortality through haying or other farm and ranch operations.	Starting from at least 100 yards from the edge of hayfields bordering sagebrush habitat (or as far as possible if the field is narrower than 100 yards), cut from the inside to the outside for the first and second cuttings.	Reduce direct mortality to broods.

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Human Disturbance			
OHV use.	Numerous new trails and patterns of heavy use, particularly in the Spring.	Prevent recreational off-road use of OHVs during the Spring in nesting habitat or in winter habitat during the winter. Off-road use for ranch purposes will consider and, if possible, avoid sage-grouse use areas.	Avoid possible direct mortality, disturbance, and behavioral avoidance.
Wildlife viewing and photography.	Birds being continually disturbed (flushed off the lek) for an extended duration in the mornings and for a number of days during the lekking season.	If public use and disturbance is recognized as an issue, the landowner will agree to coordinate with the Agencies to control human disturbance at the leks.	Avoid lek abandonment and provide for enhanced breeding success.
West Nile Virus			
Documented instances of West Nile virus.	Results of monitoring and testing of dead birds.	Where West Nile virus is identified as a threat to sage-grouse, agree to participate in a mosquito abatement program (if one exists).	Help to control mosquito populations, which are the vector for WNV.
		Report to IDFG within 24 hours upon finding any dead and/or sick sage-grouse, crows, ravens, magpies, or raptors.	Allow early notification of WNV occurrences.
Prescribed Fire			
Risk of escaped prescribed fires.	Extensive areas lacking sagebrush cover.	Do not use prescribed fire in existing or potential sage-grouse habitat until shrub cover exceeds 30%, no viable alternative exists, and IDFG approves (mechanical and chemical treatments are preferred). If prescribed fire is approved, consult with agency fire experts and take adequate precautions before implementing burns.	Increase and maintain mid and late seral sagebrush habitats.
		Consult agency fire experts and take adequate precautions before implementing prescribed burns.	
Seeded Perennial Grassland			
Seeded perennial grassland habitat reduces and fragments sage-grouse habitat.	Large expanses of monotypic grassland habitat (i.e., large expanses of unsuitable habitat).	Do not convert native rangeland to monotypic perennial grass seedings.	Avoid new habitat losses and fragmentation.
		Reduce the amount of monotypic perennial grass stands by either allowing shrubs and forbs to reinvade seedings naturally (passive management) or by reseeding/planting (active) to increase suitable sage-grouse habitat. All seed mixes and restoration strategies used in potentially suitable sage-grouse habitat will be developed in coordination with the Agencies to ensure appropriate shrub, forb, and grass components.	Increase the availability and continuity of sagebrush habitat.

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Climate Change			
Maintain healthy native plant communities and control exotic invasive plants.	Expansion of annual grass and weed dominated communities.	All issues associated with climate change are addressed under other threats - wildfire, livestock impacts and sagebrush control.	
Isolated Populations			
Need to protect, improve, or restore habitat.	Spring populations of sage-grouse less than 500 individuals.	Increase the amount of suitable sage-grouse habitat.	Increase the population.
		Allow IDFG to translocate sage-grouse to enrolled lands.	
Predation			
Excessive levels of predation that appears to be affecting sage-grouse populations.	Reduced populations over time, observed predation on adults, chicks, or nests.	Cooperate in specific projects designed to identify levels of and types of predation, along with such control efforts as may be prescribed by IDFG.	Reduced mortality from unduly high predator populations and those that are the products of human neglect.
		Where needed, manage personal or employee owned pet dogs and cats to prevent harassment or mortality of sage-grouse. Promptly remove feral cats and dogs.	
		Reduce predator habitat by removing junk piles and brush piles, dilapidated buildings, unnecessary tall structures, etc.	
Urban/Exurban Development			
New rural residences fragment habitat, reduce shrub cover, increase infrastructure, increase potential for wildfire, increase disturbance and introduce more domestic animals as predators.	A profusion of rural residences and their associated outbuildings, power lines, driveways, fences as well as the increased level of human and pet disturbance adversely affect large acreages of habitat.	Do not subdivide or build residences and their associated outbuildings and other infrastructure (e.g. overhead utilities, roads) in existing or potentially suitable sage-grouse habitat.	Avoid habitat loss and fragmentation during the time of the agreement or in perpetuity.
		Enter into a perpetual or term conservation agreement.	
Sagebrush Control			
Mechanical or chemical removal of sagebrush.	Areas of native sagebrush have been cleared to develop other cover types.	Sagebrush management may only occur in areas where sagebrush cover exceeds 30% and the treatment will not reduce the overall average cover of the pasture to less than 10%, or the treatment is designed to restore sage-grouse habitat and the Parties agree to the approach.	Avoid the loss and fragmentation of sagebrush habitats.

Threat and Issues from the State Plan	Within the WCPA, As Evidenced by...	Potential Conservation Measures by Participating Property Owners	Expected Conservation Benefit
Insecticides			
Insecticides may kill sage-grouse, particularly young chicks, or decimate the insects which chicks need early in their lives.	Any insecticide use within and around areas used by sage-grouse during the brood-rearing season.	Do not use Carbofuran or Chlorpyrifos	Reduce direct mortality from insecticides and increase insects for chicks.
		Do not use Dimethoate within 100' of sagebrush habitat.	
		Delay insect control efforts in and within 1/4 mile of existing sage-grouse habitat (areas of 5% or greater sagebrush cover) until no earlier than June 15 unless approved by IDFG.	
Agricultural Expansion			
Conversion of sagebrush to other uses reduces and fragments habitat.	Conversion of sagebrush to irrigated or dry agricultural fields.	Do not convert rangeland to cropland (irrigated or dry) or irrigated pasture unless approved by IDFG.	Maintain important shrub cover as breeding, brood-rearing, and winter habitats.
Sport Hunting/Poaching/Accidental Shooting			
Although sage-grouse sport hunting is not allowed in the WCPA, direct mortality from poaching or accidental shooting can and does occur.	Regular reports of poaching or observations of dead birds that have been shot.	Report dead sage-grouse, particularly if appears it was poached or shot accidentally within 24 hours.	Provide an "early warning" to prevent mortality from illegal or accidental shooting.
		Instruct all hunters (family members, employees, and guests) on the importance of avoiding killing sage-grouse.	

Expected Conservation Benefits

As identified in the FWS's Candidate Conservation Agreement with Assurances Final Policy 50 CFR 13-17 (FWS and NMFS 1999) the FWS must determine that the conservation measures and the expected benefits, when combined with those benefits that would be achieved if it is assumed that similar conservation measures were also implemented on other similar properties, would preclude or remove the need to list sage-grouse. When making a decision to list a species under the ESA, the FWS is required to determine whether the species is threatened by any of the following factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range, (2) overutilization for commercial, recreational, scientific, or educational purposes, (3) disease or predation, (4) the inadequacy of existing regulatory mechanisms, or (5) other natural or man-made factors affecting the species' continued existence. While there are threats to the sage-grouse related to each of these factors, the Agreement also includes measures to reduce threats which would otherwise impact the survivability of the species and, more directly, to meet the CCAA standard.

Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range within the WCPA

Habitat destruction and deterioration appears to be a leading cause of the population decline of sage-grouse and is among the greater threats within the WCPA. Historically, portions of the native shrub community within the WCPA have been lost to seeded perennial grasses, irrigated agriculture, urbanization and the infrastructure associated with human development. While conversion to agriculture and to perennial grassland pastures has likely reached its limits, human encroachments are probably just beginning and more conversions to rural residences or small acreage ranchettes are expected.

Exurban Development

Exurban development, in the form of rural subdivisions and small acreage “ranchettes,” is rapidly becoming a major factor on the landscape. Figure 6 shows new domestic wells (a surrogate for new houses, since virtually all rural residences in the planning area are associated with a well), together with sage-grouse telemetry locations through 2009. The increase in wells over the past decade illustrates the threat that rural residential development poses to maintaining large grouse habitat patches and the connectivity between them. In addition to the footprint of the houses, associated roads and outbuildings on the landscape, it is important to note that there are inevitable ancillary effects that are very unfavorable to sage-grouse. For example, experience indicates that there will be an increase in the number of domestic cats (and likely a corresponding increase in feral cats), and horses associated with “ranchettes.” While a house and outbuildings may occupy only an acre of land within a 50-acre ownership, the impact of one or more horses on the surrounding native range of this size is well known and often significant, particularly if they are left to forage on the native range for much of the year.

Some have observed that reduction in the size of ranch operations into smaller ownerships with accompanying smaller pastures may be a significant issue. Such disaggregation usually includes more land being converted from rangelands to home sites or other areas of intense human use and to pastures that are occasionally too small to support the livestock placed in them without supplemental feeding. This both reduces the cover and composition of native species and increases the likelihood that livestock will encounter nests or otherwise physically disrupt the birds’ life cycles. Finally, the roads, power lines, increased traffic and additional fences that are associated with rural residential development not only further reduce or fragment habitat but also pose physical threats to sage-grouse.

Projected population growth estimates for Washington and Adams counties through 2035 (Idaho Power 2008) estimate that the population of the WCPA would increase by approximately 3,650 individuals over 30 years. Since there are an average number of four people per household, we determined that there would be approximately 913 new residences constructed in the WCPA within 30 years. Using past patterns of development, approximately 675 of these new residences are expected to be constructed in exurban areas (i.e., areas that could have sage-grouse habitat). Based on actual physical habitat losses (buildings, corrals, pastures, driveways, power lines) as

well as disturbance factors (e.g. human activity, dogs and cats), we estimated that each household would result in the effective sage-grouse habitat loss of approximately 180 acres. Through this analysis, as well as taking into account the number of new houses that will be developed in previously developed areas and overlapping footprints between nearby residences, we estimated that the WCPA would lose approximately 51,049 acres of existing sage-grouse habitat over 30 years to exurban development. These losses are taken into account in the Fair Share Model (Appendix C).

One of the basic premises of this CCAA is that the regulatory assurances within it will make it more attractive for more property owners to maintain their ranch operations and lower the potential that these lands will be sold and divided for exurban development. Toward that end, the CCAA proposes that potential participating property owners consider agreements to not develop specific areas of their enrolled lands, particularly those with high sage-grouse values. Such decisions are key to the success of this Agreement, but can only be carried out through the actions of individual property owners. The conservation benefit is obvious—habitat remains intact and of a sufficient size and quality to maintain sage-grouse populations and life cycles.

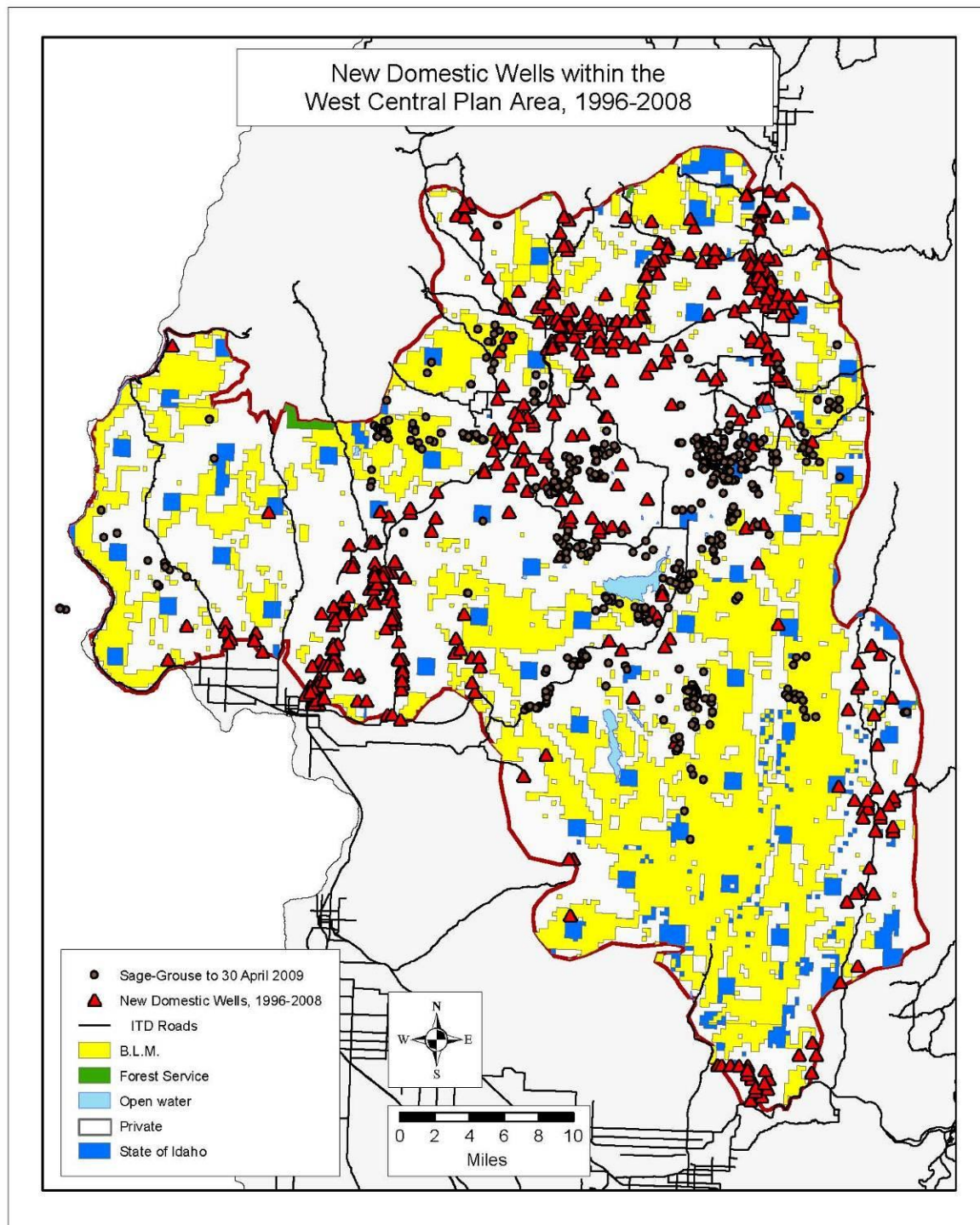


Figure 6. Growth of exurban development within the West Central Planning Area (Source: Id. Dept. of Water Resources domestic well data, 2006).

Livestock Operations and Management Impacts

Grazing of cattle and sheep are the dominant land use within the WCPA. The relatively large ranching landscapes have helped create habitat that is largely intact and without the roads, power lines and human intrusions attendant to more intensive land uses such as oil and gas development that have degraded habitat in so many areas throughout the range of sage-grouse. However, there have been unfavorable impacts from grazing as well, particularly in areas where intensive grazing, coupled with purposeful removal of shrub communities, have altered native vegetation communities and the normal distribution of successional stages in sagebrush-bunchgrass communities. The challenge in managing grazing impacts lies with the ability of ranchers to readily identify unfavorable conditions and to rectify them. This is not always easy—sagebrush-bunchgrass communities are inherently arid, and changes in vegetative composition are subtle, often not recognizable until the adverse trend is well-established. From a rancher's perspective, he or she is limited in their ability to change vegetative conditions over time by the management of herds, specifically where and when they graze, for how long and in what numbers. These decisions, coupled with fences, gates and herding techniques, salt and mineral placement, seasons of use, water development, and numbers and kinds of livestock constitute the vast majority of what is available in the ranchers' toolbox.

Conservation measures related to livestock management take two forms. The first is avoidance and minimization of direct physical threats. These would include such measures as not concentrating livestock in known breeding or brood rearing habitat or near known leks during the times these areas are in use. The second is unfavorable modifications to habitat, particularly breeding and brood-rearing habitats. Some of these impacts are easily identified. For example, spring grazing could reduce grass and forb heights below seven inches. An appropriate conservation measures could be to move livestock from an area to protect adequate nesting cover (dependent on the site potential). However, some are less visible, particularly on a short-term basis. Therefore, subtle changes in species composition, grass/forb mixture and shrub cover can only be determined by establishing long-term trend monitoring for each pasture to address future grazing management (timing, intensity or duration) should trend move away from desired conditions.

The expected conservation benefits of these practices are both short and long term. Removal or minimization of physical threats has an immediate impact, such as relocating livestock from nesting habitat before grass or forbs are grazed too low. Over the longer term, changes in species composition or shrub height that are attributable to grazing are much harder to reverse or to move toward a more favorable condition. It should be noted that in this arid climate, while positive trends can be hard to establish through changes in grazing management, it is possible to damage good conditions very quickly. As members of the local working group are quick to point out, there are numerous instances within the WCPA where too many animals grazing for too long have decimated both understory grass and forbs and the overstory shrubs. So, in general, maintenance of currently suitable habitat that meets the guidelines in the State Plan is a function of the old medical dictum, "First, do no harm." If that becomes a basis for livestock management in already suitable sage-grouse habitat, then it is likely the habitat can continue to support the species.

Fire

Fire is a perennial threat to sage-grouse habitat. However, the effect of fire, depending upon the size of the burns, condition of the vegetation community being treated, and the existence of additional sagebrush areas, can be both transitory and beneficial by helping to maintain a mosaic of vegetative conditions that, across a wide landscape, support various seasonal and life cycle needs of the grouse. Between 2000 and 2007, 21 wildfires burned 12,031 acres within the WCPA (Figure 7, Table 2). These fires occurred predominantly in native shrub cover, affecting 2.5 percent of the potential sage-grouse habitat in the area. USGS's "Shrub Map" (USGS 2005) classification (coarse scale) shows 12.4 percent of the nearly one million acres in the West Central Planning Area as annual grasslands (Table 2). Rehabilitation of annual grasslands found in the drier areas (less than 12" precipitation zone) with poor soils and difficult terrain involves high economic cost with variable success. Therefore, much of the landscape within the WCPA has reached a point at which remaining sagebrush stands must be protected and fire can no longer be viewed as a constructive force across the landscape. Another threat posed by wildfire is the potential for burned areas to become colonized by noxious weeds and annual grasses.

We completed GIS analyses of fire history data (1950 – 2009) for the WCPA. Results from these analyses showed that there was high annual variation in acreages burnt, but that there was not an apparent trend. Using this data as well as taking into account natural sagebrush recovery rates for this area, we anticipate that the WCPA will lose approximately 98,820 acres of sagebrush habitat to wildfire over the next 30 years. Despite all efforts by Agencies and individuals, the future loss of sagebrush habitat to fire is inevitable. These anticipated losses are taken into account in the Fair Share Model (Appendix C).

Conservation measures for fire include prevention of new fires and suppression of those that do start, particularly those in important sage-grouse habitat, as well as participation in restoration activities post burn (e.g., native seeding/planting, temporarily removing or reducing livestock use). In reality, both prevention and suppression of actions are largely outside the abilities of individual property owners and rest with public agencies, including the BLM and rural fire departments. Actions that property owners may take include "greenstripping" or fire breaks in areas of high ignition potential like alongside public roads. However, the construction and maintenance costs of greenstripping may be cost prohibitive and firebreaks may prove to be detrimental by acting as weed vectors.

Even though property owners are not well-equipped to fight fires, they often do, building firebreaks with their tractors and discs, particularly in accessible areas. Such efforts can be valuable, but not without liabilities and risks. However, actions to suppress fires in areas that provide breeding and winter habitat are probably among the most beneficial of conservation measures. Once those important sagebrush stands are burned, sage-grouse use could be adversely affected for 20 years or more.

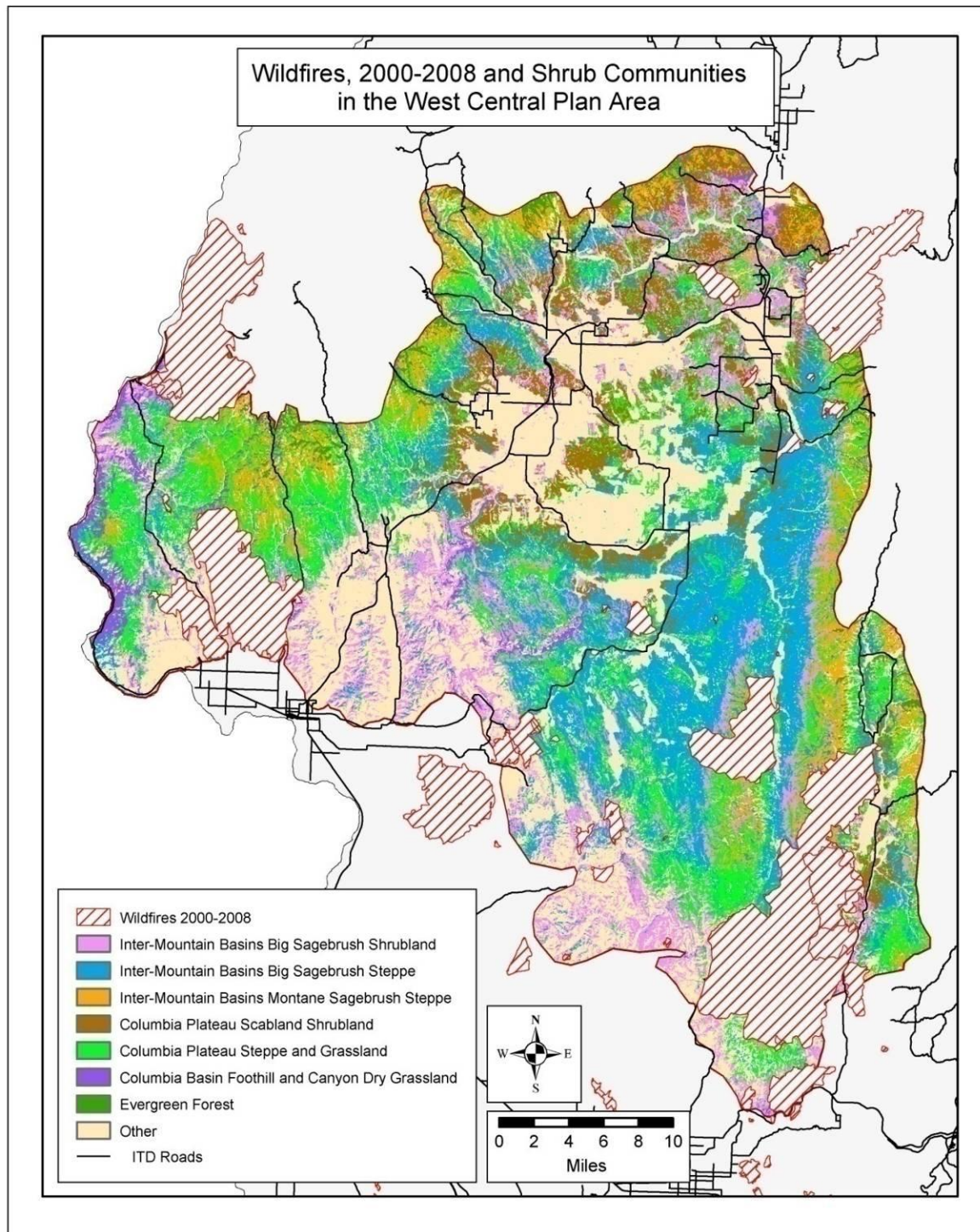


Figure 7. Recent wildfire history of the West Central Planning Area. White areas within the Planning Area are not shrub communities. (Based on BLM, unpublished data, 2008).

Annual Grass Invasions

Suring et al. (2005) developed a model for the risk of cheatgrass displacement of sagebrush and other native vegetation in the Great Basin. The rapid and aggressive spread of cheatgrass has been facilitated by a number of ecological traits that allow it to out-compete native species for water and nutrients on sites where it is adapted. Model parameters include slope, aspect, elevation and landform. Professional opinion (S. Leonard, pers. comm. 2007) based on empirical observations in the WCPA suggests that cheatgrass (and medusahead on some soils) displacement of native perennials is of greatest concern in the drier areas (less than 12 inches precipitation), particularly in the southern-most portion. Flat areas with high clay content in the soil are especially susceptible. South and west exposures are also more susceptible to invasion than northern exposures, especially at slopes greater than or equal to 30%. The combination of slope and aspect may raise the elevations expected to be at risk according to Suring et al. (2005).

As precipitation increases, the ability of cheatgrass to out-compete natives for moisture and nutrients decreases. The higher potential productivity and density of native understory grasses may also allow for faster recovery rates of fire-tolerant species. Natural dynamics associated with sagebrush development stages become more dependent with pre-fire vegetation composition and post-fire management.

Because the invasive nature of cheatgrass (and medusahead) is further facilitated by fire below the 12-inch precipitation zone, wildfire and prescribed fire are a threat to achieving natural ecological dynamics associated with sagebrush community development stages and associated habitat. In higher precipitation zones, both wildfire and prescribed fire may occasionally be management options (assuming sagebrush is not otherwise limiting across the landscape) although mechanical treatments are more likely to be safer.

Higher elevation portions of the WCPA do not generally have the large areas of cheatgrass that frequently follow large-scale wildfires that typify other areas of Idaho. The combination of higher elevations and increased moisture, soils, and a history of frequent but low-intensity burns have served to restrict large areas of annual grasses to lower elevation sites with clay soils, generally outside the areas currently used by sage-grouse. Unfortunately, in those areas, most of which are in the southern and southeastern portions of the WCPA, cheatgrass and perhaps the even more threatening medusahead rye, have followed recent fires and have now created areas that must be restored if they are to again serve as habitat suitable for sage-grouse. In addition, there are smaller inclusions of both cheatgrass and medusahead rye, particularly in areas of old lakebed sediments that are scattered within suitable sage habitats, but their small size and isolation make rehabilitation impractical, even if it were technologically possible.

At some future point, technologies to replace cheatgrass and medusahead rye with native species at a reasonable cost will hopefully be developed. If so, areas along the southern and western perimeters of the WCPA can benefit from restoration actions. Until that time, however, it would appear that the most effective conservation action is the prevention and suppression of wildfire, particularly in important sagebrush habitats and that will have the benefit of both maintaining existing shrub cover but also preventing incursions of annual grasses.

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Greater sage-grouse cannot be hunted within the West Central Planning Area. These prohibitions have been in place for over 20 years and no relaxation of the current restrictions is expected during the term of the Agreement. Undoubtedly some poaching and accidental shooting occurs but there is no evidence that this is a major mortality factor (M. Sands, IDFG Conservation Officer, Washington County, pers. comm.). Nonetheless, this Agreement includes educational efforts designed to help continue to limit losses from illegal hunting or accidental shooting.

IDFG has maintained an active sage-grouse trapping program as well as following their movements through radio telemetry for the past two years. Those involved in this effort report minimal levels of unintentional mortality from trapping and collaring the birds, resulting in minimal effects on the population.

Disease or Predation

Because the populations of sage-grouse within the planning area are largely isolated, a disease outbreak could have a severe effect on the species. This possibility is heightened by the presence of West Nile virus within the planning area. At least two birds have been found to have been exposed to the disease, although that may not have been the cause of death. Nevertheless, detection of the virus in birds in other areas of the state and the documentation of the disease in humans and horses within the WCPA raise the potential for large-scale outbreaks among susceptible species, including sage-grouse. In the WCPA, the decrease in average lek attendance from 25 male sage-grouse in 2006 to 10 males in 2007 may serve as an indicator of mortality due to West Nile virus during the WNV statewide outbreak in late summer 2006.

Predation has also been suggested as one of the causes of the sage-grouse long-term declines. Predators can have a severe impact on prey populations that occur at critically low numbers or where patches of habitat are so small that the opportunity for grouse to escape predators is limited. The results of the telemetry studies provide some insight into current levels of predation. Since radio-collaring of local sage-grouse began in 2005, 12 of 28 collared birds have been killed by predators (Commons-Kemner and Gray 2008).

Inadequacy of Existing Regulatory Mechanisms

Currently, sage-grouse are protected in the WCPA by state law, including a hunting season closure that has existed for over twenty years (IDFG, unpublished). There are no zoning or other land use restrictions that protect important areas of habitat from unfavorable land use changes at either the state or local level, although recently local zoning officials have begun to consider sage-grouse habitat in their decisions.

Fires are generally fought aggressively within the WCPA, largely because of the intermingled private lands and the level of human development within the area. Fire control efforts are shared by volunteer fire departments within the area, the BLM and the Idaho Department of Lands.

Local fire plans do not include important sage-grouse areas as high priorities for protection and suppression efforts. However, identifying these priority areas is well within the provisions of this CCAA, and can be achieved through the collective actions of the WCLWG and the Agencies.

Approximately 30 percent of the land in the WCPA is managed by the BLM, Four Rivers Field Office. The primary guiding management framework for the area is the Resource Management Plan (RMP) which guides management decisions throughout the planning area on activities such as livestock and travel management, wildlife, and other resources. The Four Rivers RMP is currently under revision. The alternative analysis does consider sage-grouse as a sensitive wildlife species, and new restrictions on development in certain areas are proposed. However, it is uncertain at this time what alternative will be implemented. The existing RMP is dated to 1988, and many updates that more explicitly address sage-grouse are expected through the revision process.

It must be noted that two developments within the WCPA have strengthened the regulatory mechanisms that might benefit sage-grouse. In the 2008 election, voters approved the creation of a mosquito abatement district, largely out of concern over West Nile virus. As the objectives and operations of this new publicly funded entity become clearer, it is possible that it can become a tool to control mosquitoes and West Nile virus in sage-grouse habitats. Second, due largely to the recent efforts of the WCLWG, the Washington County Planning and Zoning Commission and staff have become aware of and interested in the impacts of exurban development on sage-grouse habitat.

Other Natural or Man-made Factors Affecting the Species' Continued Existence

At this time, there is no energy development formally proposed for the WCPA. There are some new exploration leases for natural gas in the area between Payette and Emmett along the Payette River, but generally outside the priority areas for sage-grouse. There have been explorations and expressions of interest in geothermal resources to the east of Weiser and a limited number of permit applications for development on BLM land have been filed; no development has occurred at the time of this Agreement. There are no applications or apparent interest in wind power development. Major transmission lines do currently cross within the WCPA; we are not aware of any additional proposals for transmission development.

The use of pesticides to control grasshoppers, Mormon crickets, and noxious weeds may have an impact, either through direct contact with individual grouse, by consumption of insects exposed to pesticides, or by reducing all insect populations during times when insects make up a crucial part of the birds' diets. However, this is speculation and there is no available evidence that would indicate such problems within the planning area.

Indiscriminate cross-country off-road vehicle use has increased significantly within the WCPA during the last 20 years but it is largely limited to public land. Although this may adversely affect grouse during breeding or brood-raising, there is no evidence of this within the WCPA currently.

Relationship of the Agreement to the Five Threat Factors

Implementation of this Agreement is intended to reduce threats to sage-grouse under each of the five threat categories that must be considered in any future listing decisions by FWS. The conservation measures identified in the Agreement and the site-specific plans are expected to benefit sage-grouse in the form of maintenance, enhancement, and restoration of sage-grouse populations and their habitats as well as reducing the threats of direct mortality. Since non-Federal property owners control lands that are proven to be important habitat for sage-grouse, conservation of this species would be enhanced by creating an Agreement that encourages the implementation of grouse conservation measures by the enrolled property owners.

Landowners who are interested in enrolling under the Programmatic CCAA will need to agree to contribute to the maintenance of adequate amounts of sagebrush cover on their enrolled lands. As stated above, all participating property owners will agree not to convert sage-grouse habitats to unsuitable habitat. As described above, we have developed a Fair Share Model to account for variation across landowners and to ensure equitable application of the CCAA Standard across all potential enrollees' properties (see Appendix C). If the lands that a property owner wishes to enroll are currently meeting their Fair Share, they will be required to maintain that habitat, but will not be obligated to restore additional areas. If the lands that a property owner wishes to enroll do not meet their Fair Share, they must agree to maintain the habitat they currently have, and to restore at least as many acres as necessary to meet the Fair Share over the term of their site-specific plan and certificate of inclusion. Restoration may be accomplished by either seeding/planting (active restoration) or by implementing grazing practices and fire prevention measures to allow the natural reestablishment of sagebrush to occur (passive restoration) during the term of the site-specific plan and certificate of inclusion. Since the Fair Share Model was designed to determine the *minimum* amount of habitat required for enrollment, a landowner may agree to additional habitat restoration conservation efforts.

The Agreement addresses the threats to sage-grouse under all five factors upon which the FWS would base a future ESA listing decision. Conservation commitments include measures to maintain/enhance habitat, loss of which is the greatest threat to sage-grouse in the WCPA. Conservation measures also include commitments to reduce direct grouse mortality from farming or ranching operations. Should all necessary property owners within the project area participate and provide conservation measures similar to those in this Agreement, a substantial conservation benefit would be realized for the species. The Agreement and site-specific plans are expected to result in a larger number and more widely distributed population of sage-grouse. As required by the CCAA standard, if the Agreement were implemented on all "necessary" properties the FWS believes that the need to list sage-grouse would likely be precluded for the threats addressed in the CCAA and for the area that it covers. However, the WCPA is isolated and spatially small relative to the range of the species; threats in areas outside the covered lands could still cause the species to be listed.

V. Covered Activities, Obligations of the Parties and Implementation of the Agreement

Covered Activities

As described above, lands that could be enrolled under this Agreement will generally include those that are currently farmed or managed as part of range livestock operations. In addition, these same lands provide numerous recreational benefits for family members and guests, some of whom pay for recreational services by leasing trespassing rights or through other mechanisms. For the purposes of this Agreement, the following land use, management and recreational activities are defined as “covered activities,” although they will be further refined in individual site-specific plans.

Range and Livestock Management: Grazing of forage; feeding hay and dietary supplements in various pastures; calving and branding operations, including temporary penning of animals; disposal of dead animals; construction and placement of fences and watering sources; gathering and shipping livestock; general stewardship and animal husbandry practices.

Recreation: Legal hunting and fishing; use of recreational vehicles both on and off established roads (as may be further described in individual site-specific plans); horseback riding, camping and hiking.

Farm Operations: cultivation of existing fields, including planting, cultivation and harvesting small grain, corn, seed and hay crops; mechanical treatment of fields and pastures; irrigation by flooding or sprinklers; weed control within fields and along ditch banks by burning; application of manure; maintenance of houses, outbuildings, fences and corrals, and road maintenance. While it is common to use various herbicides, insecticide, rodenticides and other chemicals (collectively known as “pesticides”) in the course of various land uses and management described in this section, the uses of these chemicals are not defined as “covered activities” under this Agreement and no incidental take coverage is being sought for their use as a part of this Agreement. This is consistent with the FWS Region 1 Regional Guidance regarding chemical use and Section 10 permits (FWS and NMFS 1999). However, nothing in this Agreement confers any additional regulatory authority to any state or Federal agency with respect to the otherwise lawful use of these chemicals.

Responsibilities of the Parties

Idaho Department of Fish and Game

1. Hold the 10(a)1(A) enhancement of survival permit issued under this Agreement.
2. Continue as an active participant in the West Central Sage-grouse Local Working Group, offering technical assistance and support. Collaborate with the local working group to identify the individual conservation measures in this Agreement that can best be implemented through efforts at the local level and maintain an implementation schedule for completing those actions.

3. Promote the development of individual site-specific plans through information and cooperation with landowners and those who may assist landowners in the development of these plans
4. In cooperation with property owners and the FWS, develop, review and approve site-specific plans that are consistent with this Agreement and issue “certificates of inclusion” under their permit. In those cases where the Agencies agree that the terms of site-specific plans are not being met and where efforts with the landowner to resolve compliance issues have not been effective, cooperate with the FWS to suspend or revoke, in whole or in part, the certificates of inclusion.
5. Provide training and protocols to implement this Agreement to assure the consistency and quality of site-specific plans.
6. In cooperation with the Governor’s Office of Species Conservation, seek funding to implement this Agreement.
7. Coordinate completion of all monitoring requirements set forth in this Agreement as well as site-specific plans developed pursuant to this Agreement.
8. Coordinate completion of all reports pertinent to this Agreement and its implementation.
9. Assure property owners are personally notified at least 48 hours in advance with a time, location, and name of all IDFG personnel entering the property. Nothing in this Agreement shall mean the enrolled lands are open to public access unless agreed to by the participating property owner.
10. Available funding will determine the IDFG’s ability to enroll property owners and implement this Agreement.

Participating (“enrolled”) property owners

1. Implement all agreed upon conservation measures in their site-specific plan.
2. Allow agency access to the enrolled property to identify or monitor sage-grouse and their habitat, document habitat conditions, implement conservation measures, and monitor effectiveness and compliance with the Agreement and their site-specific plan.
3. When requested, allow cooperating agencies, primarily NRCS, IDFG, and FWS to share habitat and other planning or monitoring information related to the enrolled properties.
4. Actively pursue any needed funding to implement their site-specific plan. This may include applying for Federal Farm Bill programs, the FWS Partners for Fish and Wildlife

Program, State Wildlife Grants, Habitat Improvement Program or other public and private grant programs.

5. To the extent practical, record dates, locations, and numbers of sage-grouse found on their property to be included in the annual report and for study purposes.
6. Encourage appropriate local efforts to protect grouse populations and habitat through adequate fire prevention and protection, land use planning and zoning, mosquito abatement, weed control and insect control which recognizes and minimizes the potential impact on sage-grouse.
7. If needed and feasible, participate in reestablishing sage-grouse habitat after wildfires. This participation may include applying for available grants.
8. Consider conservation easements or agreements to limit development as part of their site-specific plan.
9. Report observed mortalities of sage-grouse to IDFG within five days.
10. Cooperate and assist IDFG with monitoring activities and required reporting identified in their site-specific plan.
11. Participate in annual monitoring which includes but is not limited to residual vegetation and shrub cover. Specifics will be further articulated in the site-specific plan.

Natural Resources Conservation Service (NRCS):

1. Assist in the development of mutually agreeable site-specific plans in cooperation with participating private property owners, IDFG and FWS when landowner is interested in NRCS technical assistance or Farm Bill programs.
2. With the assistance of the prospective participating property owner, complete a conservation plan and ensure that the landowner's proposed actions meet the applicable regulatory standards and goals of this Agreement, including providing an adequate quantity and quality of habitat, maintaining existing suggested land use practices, and continuing maintenance of the property. NRCS will provide a draft conservation plan and any associated conservation measures or habitat management plans to the other Parties for review and comment upon receiving concurrence from the participating property owner.
3. Upon receiving written concurrence of the proposed actions in the conservation plan from each of the other agencies, NRCS shall finalize the conservation plan with the participating property owner and begin implementation according to schedule.

4. Provide to the participating property owner and each Party to this Agreement copies of conservation plan and backup material, upon receiving concurrence from the participating property owner.
5. Provide technical assistance to participating property owners, to the maximum extent practicable, when requested.
6. Inform the FWS of any known covered species mortalities or injuries within five working days of receiving notice from a participating property owner of such event.
7. Assist the IDFG and FWS in determining when the terms of site-specific plans or associated conservation plans (e.g., grazing management plans) are not being met.
8. Make funding available through Farm Bill or other assistance programs to Cooperators in accordance with this agreement. Funding is contingent on annual appropriations from Congress.
9. Provide data collected from enrolled property owners, surveys, and monitoring to the IDFG in a timely manner to allow IDFG to compile reports on implementation of the Agreement, upon receiving concurrence from the participating property owner.

U.S. Fish and Wildlife Service

1. Assist in the development of mutually agreeable site-specific plans in cooperation with participating property owners and IDFG.
2. Issue IDFG a Section 10(a)(1)(A) permit, in accordance with 50 CFR 17.22(d) or 17.32(d), that would provide participating property owners authorization for limited incidental take of sage-grouse and provide regulatory assurances should the species be listed under the ESA. The term of the permit shall be included as part of the site-specific plans and certificates of inclusion. Consistent with FWS policy, incidental take of sage-grouse as a result of any pesticide use would not be authorized under the permit.
3. Carry out any responsibilities for implementing conservation, monitoring or other measures agreed to by the FWS under any site-specific plan or memorandum of agreement associated with this Agreement.
4. To the extent funding is available, provide FWS funding to support implementation of this Agreement and site-specific plans.
5. In those cases where the Agencies agree that the terms of site-specific plans are not being met and where efforts with the landowner to resolve compliance issues have not been effective, cooperate with the IDFG to suspend or revoke, in whole or in part, the certificates of inclusion.

Roles of those Entities Not Party to this Agreement

The IDFG will seek the cooperation of other agencies and private parties in the implementation of this Agreement and may delegate or manage some of its responsibilities under this Agreement through a memorandum of understanding or other arrangements. This Agreement envisions measures which imply actions by various entities that may not be a party to it, but which have responsibilities and missions that are important to the success of the Agreement. These might include the Idaho Department of Lands, the Forest Service or BLM with fire protection responsibilities for lands within the planning area. In addition, local governments have responsibilities for mosquito abatement, weed and insect control, fire protection and planning and zoning, all of which carry major implications for the success of this Agreement. Finally, such groups as the University of Idaho or the Idaho Rangeland Resources Commission have information or could help with data collection or communications activities that would be helpful to achieving the objectives of this agreement. Examples of the roles of these entities not party to this Agreement might include providing available funding to assist in the implementation of this Agreement and associated site-specific plans.

Implementation of this Agreement

Upon determination that this Agreement is consistent with the FWS' final policy (50 CFR 13-17, FWS and NMFS 1999) and upon execution of this Agreement by all agencies and compliance with all applicable laws, regulations and policy, the FWS will issue a Section 10(a)(1)(A) Enhancement of Survival Permit to the Idaho Department of Fish and Game. The Permit will include, among other things, ESA regulatory assurances set forth at 50 CFR §§ 17.22(d)(5) and 17.32(d)(5). As described below, assurances are provided to any participating property owner (with an approved site-specific plan) that their land management activities will not be curtailed or modified beyond what is stipulated under the Agreement and their site-specific plan.

Execution of this Programmatic CCAA will require development of site-specific plans for individual landowners. It is not clear how many landowners will choose to participate. It is anticipated, however, that the Agencies will receive numerous requests from landowners requesting to enroll their lands under this agreement. This will result in related responsibilities on the Agencies, particularly IDFG, to develop site-specific plans, complete initial habitat assessments and meet monitoring requirements, all of which will require a significant addition to workload. If there are numerous requests, the Agencies will prioritize them using the following criteria:

1. Are the applicant's lands currently providing breeding, brood rearing and/or winter habitat?
2. Is the acreage proposed for enrollment at least 1,000 acres?
3. Is the landowner willing to implement multiple conservation measures?

The length of time required to complete the development of a site-specific plan on a specific property will depend on the size and complexity of the land units, which influences the time needed to collect initial habitat data and develop a scientifically and economically sound plan and monitoring program. Upon approval of the site-specific plan and issuance of a certificate of inclusion, the participating property owner will have enrolled under the Agreement and has committed to implement the agreed upon conservation measures for his lands.

Interested property owners need to contact either the WCLWG or one of the agencies signatory to this Agreement. This expression of interest will trigger a process that will guide enrollment and the development of the site-specific plan (Table 6). For those interested property owners with lands considered important to sage-grouse, the Agencies will work with the property owner to complete a comprehensive habitat assessment of the property habitat conditions. In each management unit (e.g., pastures), the basis by which habitat will be evaluated will be BLM's rangeland health indicators as they apply to sage-grouse (BLM 2000), BLM's Sage-grouse Habitat Assessment Framework (BLM 2009), and/or other agency accepted assessment methods. This assessment will include such information as shrub cover within each management unit, species composition, grass and forb cover and height during the nesting season, areas of invasive annual grasses or noxious weeds, known areas of sage-grouse use, and other measures that might be appropriate for that specific site. For each management unit, the existing habitat conditions will be compared to the habitat guidelines in the State Plan (Table 3) and the unit will be classified as suitable, marginal, or unsuitable habitat. This classification will serve as a basis to prepare a site-specific plan that identifies threats to sage-grouse and conservation measures to remove or reduce threats, to identify habitats that must be maintained, and to identify the landowner's Fair Share for habitat restoration if the property does not meet the standard.

During development of site-specific plans the Agencies will work with property owners to identify irretrievable lands. Irretrievable lands are lands or areas that are part of the enrolled property, but have been permanently converted from native vegetation. This includes home and building sites, irrigated agriculture, and other areas with significant existing infrastructure (e.g., corrals). The Agencies agree that restoration back to sagebrush habitat on irretrievable lands is impractical and no restoration will be required. Nevertheless, some conservation measures (e.g., modified haying practices) may still be relevant in these areas. For the purposes of this CCAA, non-irrigated croplands (e.g., dryland farming, CRP) are not considered irretrievable lands. With landowner concurrence these lands may be identified for restoration.

Table 6. Implementation process for site-specific plan development and Certificate of Inclusion.

	Property owner Actions	Agency Actions
Step 1, Initiation	Express interest in participating.	Accept indication of interest and schedule initial meeting; notify property owner of needed information.
Step 2, Data compilation and initial assessment	Provide maps of property boundaries, pastures. Describe land uses and management.	Compile GIS coverage of aerial photography, soil maps, ecological sites, existing shrub cover, known leks, telemetry data, topographical features, etc. Determine if the property provides important sage-grouse habitat and warrants further consideration for inclusion. Notify landowner of determination.
Step 3, Field Assessment	Participate in field assessment and provide additional input on sage-grouse use, livestock management, potential conservation measures, and identification of irretrievable land, etc.	If initial assessment is positive, conduct a field assessment. Gather vegetation data (cover, composition, height, etc.) and identify physical features (buildings, roads, fences, water developments, mineral placement, etc.). Identify irretrievable lands.
Step 4, Draft Plan	Review and provide input on draft plan.	Develop a draft plan that documents current conditions, identifies threats, provides draft conservation measures, and documents the Fair Share. Identify monitoring methods and initial monitoring site locations.
Step 5, Complete Plan and Enrollment	If plan is acceptable, sign plan and Certificate of Inclusion.	Finalize plan (threats, conservation measures, and monitoring program).
Step 6, Implement monitoring program	Participate in establishing monitoring sites.	Establish field monitoring sites and record initial values. Implement monitoring program within one year of enrollment.

Each site-specific plan will also include a monitoring program so there is clear data to describe trends in habitat conditions during the term of each site-specific plan. The monitoring plan includes agency accepted monitoring protocols, identifies monitoring sites, establishes the frequency of monitoring, and defines the responsibilities to measure population and habitat trends and the need for adaptive management actions.

The responsible agencies may allow other agencies (e.g., Idaho Department of Lands), natural resource consultants, or other knowledgeable parties to complete initial habitat assessments, monitoring, or other responsibilities as necessary for implementation of completed site-specific

plans. In addition, it may be prudent to use tools such as the NRCS prescribed grazing plans to define the specific actions that a landowner will undertake regarding livestock management to meet desired conditions. It is acceptable if these plans are completed as supplements to the site-specific plan, as long as the habitat standards needed for the protection of sage-grouse are agreed upon in the site-specific plan, and a timeframe for the completion of the prescribed grazing plan is identified.

Funding

In order to implement the provisions of this Agreement, the Agencies and participating property owners will provide funding and in-kind services to the extent possible for the sage-grouse conservation measures and other measures necessary for the Agreement and site-specific plans. Although property owners may have limited ability to contribute funds for restoration activities over large acreages, they may be able to contribute equipment to disk green strips or seed restoration sites, or other in-kind resources. Major potential sources of government funds include habitat improvement funds that are a part of various Farm Bill programs; Section 6 ESA funds granted to the states for conservation of listed or candidate species; state funds appropriated to the Idaho Office of Species Conservation; State Wildlife Grants and Habitat Improvement Program funds administered by the Idaho Department of Fish and Game; and potentially the general operating funds of such agencies as the Bureau of Land Management, FWS, and the Idaho Department of Lands. In addition, private funding sources are available and these will be considered as well. Property owners can participate under this Agreement without funding from the Agencies or grants to carry out various provisions of the Agreement or site-specific plan.

VI. Assurances Provided

Upon approval of the Agreement, and satisfaction of all other applicable legal requirements, the FWS will issue a permit, in accordance with Section 10(a)(1)(A) of the ESA, to IDFG authorizing a specified level of incidental take of sage-grouse by participating property owners as a result of identified land use activities on the enrolled lands. Upon approval and issuance of the permit, the FWS will not require additional conservation measures nor impose additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the “Conservation Measures” section of the CCAA should the covered species become listed in the future. The permit will authorize a specified level of incidental take resulting from participating property owners’ otherwise-lawful activities as described in the “covered activities” portions of this Agreement. These activities may include crop cultivation and harvesting, livestock grazing and production, farm equipment operation, and recreational activities (e.g., hunting, fishing, camping, hiking, and use of recreational vehicles both on and off established roads). The FWS provides participating property owners the ESA regulatory assurances found at 50 CFR §§ 17.22(d)(5), 17.32(d)(5).

Changed and Unforeseen Circumstances

“Changed circumstances” are those changes in circumstances that can reasonably be anticipated and planned for in the WCPA. “Unforeseen circumstances” are those circumstances affecting a covered species that could not reasonably have been anticipated by the IDFG and the FWS at the time of the CCAA’s negotiation and development, and that result in a substantial and adverse change in the status of the covered species.

Changed Circumstances

Changed circumstances provided for in the Agreement. The impact of various factors such as wildfire, drought, and West Nile virus are addressed broadly by conservation measures in this CCAA. However, the Parties agree that if significant changes in these factors occur, a review of the changes and their impact on habitats, or the ability of habitat to reduce the impact, will be made. If this review supports the conclusion that additional habitat conservation measures are necessary, the Parties will take an adaptive management approach and address the change by minor amendment to the conservation measures, or take other actions as permitted within the CCAA. The Parties agree to work together in good faith to address the changed circumstance to the best of their abilities. Methods to address these changed circumstances are described below:

- **Wildfire.** Wildfire impacts affecting single or limited numbers of individual site-specific plans will be handled on a case by case basis with the individual landowners to determine the management practices to be applied. If one or more wildfires destroy or effectively eliminate a substantial amount of sage-grouse habitat within the WCPA, to the extent that the ability to meet suitable habitat conditions are not possible within the CCAA time frame, IDFG will notify the FWS within 30 days of that determination. Within 90 days of notification, the parties will meet and evaluate the conservation measures and identify potential actions which could be employed to address the change in circumstances on a given enrolled property. The Agencies will meet with the property owner and develop habitat restoration plans (including activities such as seeding and invasive weed control) to be implemented on an agreed upon schedule. Adaptive management approaches will be applied to make adjustments that will maximize the likelihood of success.
- **Drought.** Variation in precipitation amount is not an uncommon event within the WCPA. Annual monitoring and conservation measures in the WCPA on enrolled lands are expected to detect minor year to year variations in precipitation amounts and the affect on vegetation. However, prolonged or deep droughts in important grouse areas in the WCPA may create conditions that reduce seasonally available habitat beyond normal annual variation and cause changed circumstances on the landscape. Prolonged periods are defined here as 3 years or more. In this event, the IDFG will notify the FWS within 30 days of that determination. Within 90 days of notification, the Parties will meet and evaluate the drought conditions and, if opportunities exist, employ changes to the conservation measures to address local conditions. The Parties will identify potential actions which could be employed to address the change in circumstances for a given

parcel of land. The Parties will meet with property holders that graze their lands to evaluate if current livestock grazing practices should be temporarily modified and if the property owner would be willing to do so. Conservation measures that may be used to address drought conditions include but are not limited to grazing rest, deferment, rotation, or other management changes designed to retain residual and live vegetation; development of grass banks for use during drought conditions; development of additional water sources for livestock and sage-grouse; and/or other vegetation management to minimize additive impacts.

- **West Nile Virus.** The occurrence and effects of West Nile virus is largely unpredictable and outside the scope of control of FWS, IDFG, or individual landowners. West Nile virus is thought to result in near 100 percent mortality in sage-grouse. West Nile virus can cause population level declines, which can result in circumstances that are substantially different than those currently anticipated. If West Nile virus is detected in sage-grouse in the WCPA in the future, IDFG will notify the FWS within 10 days and within 30 days the Parties will meet to evaluate the situation and whether there are additional conservation measures that could be taken to ameliorate effects to sage-grouse, either by landowners or by the Agencies themselves.
- **Climate Change.** Scientists predict that climate change will result in changes to temperatures, precipitation patterns, and carbon dioxide levels in the Great Basin (e.g., Brown et al. 2004, pp. 382-383; Neilson et al. 2005, p. 150; Chambers and Pellant 2008, p. 31; Global Climate Change Impacts in the United States 2009, p. 83). These effects are predicted to result in increased wildfire and invasive species interactions, and conditions that are suitable for West Nile virus transmission in sage-grouse populations (Baker, in press, p. 24; Miller et al., in press, p. 48, Walker and Naugle, in press, p. 12). Although the current climate models are not available at a small scale (such as the WCPA), it is prudent to consider the potential impacts of climate change over the period of this Agreement. However, because the primary concerns under climate change are related to drought, fire, and West Nile virus, we believe appropriate actions to address changed circumstances associated with climate change impacts are sufficiently considered above.

Adaptive management principles will be built into all site-specific plans, for which the above changed circumstances may be applicable.

Changed circumstances not provided for in the Agreement. If additional conservation measures not provided for in the CCAA's operating conservation program are necessary to respond to changed circumstances, the FWS will not require any conservation measures in addition to those provided for in the CCAA without the consent of the permittee and property owner, provided the CCAA is being properly implemented. Funding for additional conservation measures warranted under this section will be sought by IDFG and/or other partners, including the FWS and/or the landowner if they desire.

Unforeseen Circumstances

(A) If additional conservation measures are necessary to respond to unforeseen circumstances, the FWS may require additional measures of the IDFG where the CCAA is being properly implemented, but only if such measures are limited to modifications within the CCAA's conservation strategy for the affected species, and only if those measures maintain the original terms of the CCAA to the maximum extent possible. Additional conservation measures will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the CCAA without the consent of the IDFG and participating property owners.

(B) In the event enrolled lands experience disturbances not caused by the landowner, including but not limited to flood, inordinately large wildfires, violent windstorm, disease, insect outbreak or abnormal predation that is beyond the participating landowner's control, and the event or events harm or degrade grouse habitat and/or take grouse, there will be no consequences to the participating landowner.

(C) The FWS will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the sage-grouse. The FWS will consider, but not be limited to, the following factors:

- (1) Size of the current range of sage-grouse;
- (2) Percentage of range adversely affected by the CCAA;
- (3) Percentage of range conserved by the CCAA;
- (4) Ecological significance of that portion of the range covered by the CCAA;
- (5) Level of knowledge about the sage-grouse and the degree of specificity of the species' conservation program under the CCAA; and
- (6) Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the sage-grouse in the wild.

VII. Duration of the Agreement, Permit and Site-Specific Plans

The duration of this Agreement will be no less than 30 years from the date upon which the Agencies have signed it. The permit issued in accordance with this Agreement would become effective on the date sage-grouse become listed, and would expire on the same date upon which this Agreement expires. The FWS estimates it may take ten years of implementing the Agreement and site-specific plans to fully benefit the species, although some level of benefits will likely occur much sooner. Therefore, the duration of any individual site-specific plan will be a minimum of ten years, with the specific duration identified in each site-specific plan. Landowners must notify IDFG within 90 days of expiration of their site-specific plan if they wish to consider extending the duration of their enrollment. Enrolled property owners will notify the IDFG and the Service at least 60 days in advance of a potential land sale or transfer. Both requirements are designed to allow the Agencies to review the status of the Agreement and the distribution of sage-grouse and habitat on the land and make informed decisions about the best course of action.

The IDFG will notify the FWS 90 days prior to expiration of the Agreement to allow sufficient time to extend the Agreement, if desired. If a landowner wishes to enroll property after year 20 of the Agreement and the species has not been listed, it would require agreement of the Agencies to extend the term of the Agreement and permit.

Inclusion under the Agreement and permit will only apply to those participating property owners who enroll lands under this Agreement through approval of a site-specific plan and issuance of a certificate of inclusion prior to any future effective ESA listing date of sage-grouse. Future non-enrolled property owners wishing incidental take authorization for sage-grouse after any future effective ESA listing date could apply for authorization through the FWS's Habitat Conservation Plan or Safe Harbor Agreement permitting programs.

Amendments

There may be occasional reasons to amend this Agreement prior to the date of its expiration. For instance, it may be necessary to modify the CCAA to add or remove a species covered by the CCAA, extend or shorten the duration of the CCAA, change the boundaries of the planning area, or add or remove a conservation measure covered by the CCAA. In order to facilitate an effective amendment process, the parties agree to a set of amendment stipulations that includes: (1) notification to ensure that all parties are provided any proposed amendments; and, (2) an opportunity for all parties to review and respond to any proposed amendments.

For each proposed amendment, the FWS must determine whether the proposed amendment is a minor or administrative change, or a major modification of the CCAA that could result in outcomes that are significantly different from those analyzed for the original CCAA. In particular, amendments for actions that would either (1) result in a different level or type of take than was analyzed in association with the original CCAA or (2) result in a change to the cumulative conservation benefits to the covered species such that the CCAA Standard might not

be met would require additional analysis and would, therefore constitute a major amendment. Major amendments are likely to be subject to the procedural requirements of Federal laws and regulations, such as NEPA, and to require additional analysis by the FWS, public notification in the Federal Register, and a formal CCAA amendment process.

Minor amendments involve routine administrative revisions or changes to the operation and management program associated with the CCAA, and such minor amendments may or may not alter the conditions of the permit. Upon the written request of one of the parties to the CCAA, the FWS can approve minor amendments to the CCAA if the amendment does not conflict with the purposes of the CCAA or does not result in some material change to the FWS's analysis (i.e., with respect to meeting the CCAA standard or the amount of take authorized). These minor amendments do not require a "formal" amendment process, but they do require written documentation that the amendment was approved by the parties to the CCAA prior to the amendment becoming effective. For example, a minor amendment may include a change in monitoring or reporting protocols.

VIII. Monitoring, Reporting and Adaptive Management

Monitoring

Two kinds of monitoring will be conducted as part of this Agreement, compliance monitoring and effectiveness monitoring. Compliance monitoring involves at least an annual on-site verification of each site-specific plan to confirm that agreed-upon conservation measures have been followed or implemented according to schedule. It also requires annually retaking established photo points to document general habitat conditions. These photopoints may be augmented with small grazing exclusion cages (approximately 4 feet square) that can help demonstrate the effects of weather, site, and grazing on the ability to achieve grass/forb growth targets in any given year.

Effectiveness monitoring includes periodic population and habitat monitoring for the Agreement and the site-specific plans. Population and habitat monitoring will entail the use of standard protocols (BLM 2000, Connelly et al. 2003, BLM 2009) or other mutually agreed upon protocols (e.g., NRCS methods). Annual lek counts will be the primary basis for monitoring populations. Permanent photo points and permanent vegetation transects will be employed to determine habitat trends. Because habitats tend to change slowly, habitat monitoring will not be conducted annually but will occur at least once every five years. Population and habitat monitoring shall be the responsibility of all Parties to this Agreement. Specific monitoring responsibilities will be articulated in each site-specific plan.

Adaptive Management Strategies

Adaptive management strategies allow for mutually agreed-upon changes to the conservation measures to occur in response to changing conditions or new information, including those

identified through monitoring. The primary purpose of adaptive management is to examine alternate strategies for meeting the goals and objectives of the CCAA through research, evaluation, and/or monitoring, and then, if necessary, to adjust future actions according to what was learned in order to meet those goals and objectives. In an adaptive management framework, if the expected results of a management activity are not achieved, the management activity is either modified (if possible) or an alternative activity is undertaken in order to achieve the desired results. These strategies will be incorporated in the individual site-specific plans for lands enrolled under this CCAA. Adaptive management strategies for each site-specific plan will include the timeframes and other milestones for evaluating conservation measures. Specific agreed-upon desired outcomes and expectations will be described in each plan. Specific and detailed monitoring provisions in the site-specific plans are necessary to determine what the potential results of the management actions might be and how they might be observed and recognized in the field.

In terms of habitat restoration, we recognize that it is difficult to restore rangelands back to native shrub and grass communities; thus, we are not requiring that restoration efforts on those acres be completely successful. However, the landowner must work with IDFG and other appropriate entities to create the most conducive environment for restoration to succeed (e.g., a second reseeding effort may be required). All restoration efforts will be monitored using methods described in the site-specific plans; results will be documented in the annual report (see below).

Reporting

The IDFG, with assistance from the FWS and NRCS, is responsible for completion of an annual report on progress in implementing this Agreement by February 1st of each year. This is in addition to the reports on individual agreements referenced in Section V of this Agreement. Information in annual reports will include, but is not limited to: (1) a summary of the site-specific plans approved over the past year, (2) habitat management or other activities conducted under each site-specific plan over the past year, (3) effectiveness of these management activities in meeting the desired results, (4) status of habitat or other grouse management actions conducted in previous years, (5) results of grouse population, productivity, and habitat surveys, if any, on the enrolled lands, and (6) recommendations for future grouse management activities consistent with the Agreement. A copy of the report will be made available to the Agencies and each participating property owner.

Notification of Probable “Take”

Property owners with lands enrolled under this Agreement shall provide the IDFG and FWS at least 30 days’ notice in advance of any activity that may result in take of the covered species and provide the IDFG and FWS with a reasonable opportunity to rescue individuals of the covered species before any authorized take occurs. In addition, several of the activities covered under this Agreement, such as haying, may have the potential for incidental take as they occur on an annual, regular basis. For these activities the Agencies and enrolled property owners are encouraged to be aware of the potential for incidental take and employ measures to minimize

impacts as specified in the individual agreements. However, for those regularly occurring covered activities, there will be no additional requirement for notice of potential “take.”

IX. Level of Incidental Take

Under this Agreement, sage-grouse will be treated as if they are listed under the ESA, regardless of its current regulatory status. Incidental take of sage-grouse will be reported by each participating property owner upon approval of the property owner’s site-specific plan and issuance of the certificate of inclusion. Should sage-grouse be listed under the ESA, incidental take will be authorized through the Section 10(a)(1)(A) permit, consistent with the terms of this Agreement, the permit, and the participating property owner’s site-specific plan for the enrolled lands. Specific covered activities will be identified during development of each site-specific plan.

Within the covered area, incidental take of sage-grouse is expected to be minimal. As stated previously in the Agreement, habitat for the sage-grouse is the primary limiting factor and the continued loss of sagebrush habitat is the most likely to result in extirpation of sage-grouse within the WCPA. Hence, the protection of existing sage-grouse habitat as well as restoration of historic habitat is crucial to the continued existence of sage-grouse within the WCPA. This Agreement, inclusive of the identified conservation measures, is expected to not only limit any unfavorable impacts to the species, but also to maintain and enhance habitat on all future enrolled lands. Incidental take in the form of harassment, wounding, or killing caused by covered activities is expected to involve less than 20 individual grouse per year within the WCPA, as averaged over any 5 year period. However, maintenance of existing habitat and enhancement of marginal or unsuitable habitat to suitable habitat will far outweigh any short-term negative impacts to individual grouse caused by the covered activities. The covered activities most likely to result in incidental take are associated with farm operations, livestock production and management, and recreational activities.

Farm Operations: Incidental take of sage-grouse related to farm operation is often related to loss of habitat. However, because habitat loss is the primary reason sage-grouse could be extirpated in the WCPA and the importance of maintaining all existing habitat within the WCPA, enrollees will be required to agree to a “no net loss” standard. Furthermore, the “fair share” standard is designed to result in increased amounts of grouse habitat and corresponding increases in the grouse population over the period of the Agreement.

Crop cultivation may result in harassment and/or mortality of a few individual sage-grouse due primarily to potential strikes with farm equipment. However, the specific conservation measure requiring landowners to cultivate crops from the inside of the field to the outside of the field will allow both adults and young sage-grouse to escape harm and are intended to reduce and minimize the likelihood harm or death from this activity.

Livestock Management: Disturbance of some individual grouse may occasionally occur from feeding, calving, and herding of livestock. These effects are expected to rarely occur and will likely only result in birds being flushed a short distance. This will not likely have any adverse effect on the fitness of these individuals (please note that such effects are not take). Although occasional adult grouse mortality may also occur from fence strikes,

conservation measures have been designed to limit the risk of these losses if such losses are documented. Mortality from fence strikes is anticipated to occur very infrequently.

Recreational Activities: Incidental disturbance of some individuals may occasionally occur from recreational activities (e.g. horseback riding, ATV riding, and legal hunting of other species). These effects are expected to rarely occur and will likely only result in birds being flushed a short distance. This will not likely have any effect on the survivability of these individuals (please note that such effects are not take).

We estimate that within the WCPA no more than 20 sage-grouse may be incidentally taken in any given year of the Agreement, as averaged over any five-year period. We expect that the majority of incidental take will be in the form of harassment or death during crop cultivation and would most likely involve death to individual grouse, the destruction of nests, and loss of eggs. However, as explained previously in the Agreement, it is highly unlikely grouse will be nesting in these locations. We also note that the level of incidental take that is expected to occur under this Agreement is directly related to the number of landowners and the acreage covered under site-specific plans tied to the Agreement. The fewer the number of site-specific plans, the less incidental take will be authorized, although the maximum cumulative incidental take authorized across the WCPA is 20 sage-grouse per year. If any sage-grouse are determined to have been incidentally taken within enrolled lands during any calendar year, the Agencies and the participating property owner will identify and consider the need for and feasibility of additional protective measures to minimize any further incidental take.

Overall, given the habitat protection provided under the Agreement on enrolled lands, the long-term conservation of sage-grouse within the WCPA is expected to be enhanced by implementation of the Agreement and site-specific plans, even with authorization of some incidental take under the permit.

X. Public Involvement

This Agreement will be circulated for public review and comment, and comments received will be considered and, if appropriate, the Agreement modified, prior to the FWS making a decision on approval of the Agreement and issuance of the Section 10(A)(1)(a) permit. No further formal public reviews will occur for any site-specific plan drafted with the objective of enrolling lands under this Programmatic Agreement, as long as the site-specific plan is consistent with the approved Agreement.

XI. Signatures

Idaho Department of Fish and Game

Cal Groen, Director

Date

Natural Resources Conservation Service

Jeff Burwell, State Conservationist

Date

U.S. Fish and Wildlife Service

Jeff Foss, State Supervisor
Idaho Fish and Wildlife Office

Date

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XII. Appendices

Appendix A. Template for Landowner Site-Specific Plan

Appendix B. Template for Certificate of Inclusion

Appendix C. Fair Share Model

Appendix A. Template for Landowner Site-Specific Plan

Note: Each individual site-specific plan (SSP) must include certain discussion topics, analyses, and other information. The following represents excerpts from the draft CCAA Handbook (FWS 2003) which are applicable to individual SSPs and should serve as a template for completing those documents.

I. Parties

This section of the SSP should identify and outline each party involved in implementation of the SSP.

II. Description of Covered Land and Associated Sage-grouse Habitat and Use

This section of the SSP should identify the boundaries of the area covered by the SSP (i.e., the enrolled property) and should reference or include maps, figures, township and range, and/or legal descriptions as necessary to clearly delineate the precise boundaries of the enrolled property. It should also describe the population levels of the covered species that exist at the time the SSP is being negotiated, if those levels are available or determinable. It should also include a detailed description of the existing habitat characteristics of the lands and/or waters on the enrolled property that sustain any current, permanent, or seasonal use by sage-grouse. This description will include initial habitat condition and information as identified in Table 6 of the Agreement.

III. Identification of Threats, Conservation Measures and Management Activities

In this section of the SSP, the conservation measures and/or management activities that the property owner will undertake are identified. These conservation measures should focus on actions that eliminate or reduce the threats to the covered species on the enrolled property. Specifically, the SSP should: (1) describe the nature, extent, timing, duration, and other pertinent details of the conservation measures that the property owner is willing to undertake to address the threats and conserve the covered species; and (2) explain how the conservation measures are appropriate for the covered species and are expected to eliminate or reduce the threats to the species on the enrolled property. Each site-specific plan needs only to address those specific threats that apply to sage-grouse on the enrolled property.

The conservation measures in each site-specific plan will vary based on the types of threats present on the property, the nature of the land use and operation, the current and desired habitat conditions, and other factors specific to individual properties or pastures. Appropriate conservation measures will be chosen from the suite of measures found in Table 5 of the Agreement.

IV. Covered Activities and Level of Take

In this section of the SSP, the parties to the SSP will determine what specific Covered Activities are appropriate for the enrolled lands.

Specific authorization of incidental take is provided as part of the permit issued by the FWS in conjunction with the Programmatic CCAA. Should sage-grouse become listed under the Act, authorization for incidental take under the permit is limited to the covered activities described in this Site-Specific Plan. The level of permitted take has been defined at the programmatic scale for the entire WCPA and has been determined to be no more than 20 individuals per year, averaged over a 5 year period. Therefore, individual landowners with site-specific plans are not specifically allocated a certain amount of take. Any incidental take reported by [enrollees] will be considered in the cumulative amount of take permitted in the WCPA.

V. Monitoring

In this section of the SSP, the parties to the SSP will determine who is responsible for monitoring and reporting the progress of the SSP (compliance monitoring) and will fully describe these responsibilities. Specifically, this section should establish quantifiable criteria for measuring progress associated with the implementation of the agreed-upon conservation measures. For example, if the conservation measures consist of revising a grazing management plan to restrict livestock use in certain areas this section might describe the date(s) (month/year) when required fencing will be completed.

This section should also include provisions for monitoring and reporting the SSP's progress toward the expected conservation benefits (biological monitoring), but these provisions will likely vary among SSPs due to differing circumstances. The criteria for biological monitoring do not generally relate to the implementation of the measures but, instead, relate to determining the effectiveness of the measures. In addition, any adaptive management strategies or plans that are part of the SSP's monitoring plan should also be described in this section.

VI. Duration of the SSP

Under this Agreement, the duration of site-specific plans may vary, but will be no less than 10 years to allow adequate time for habitat improvements, and resulting positive response in populations or habitat.

VII. Miscellaneous Provisions

1. Notification of Take Requirement

By signature of this SSP, [insert name of participating property owner] agrees to provide the FWS and IDFG with an opportunity to rescue individuals of the covered species before any authorized take occurs. Notification that take will occur must be provided to the FWS and IDFG at least [30] days in advance of the action.

2. Amendments or Modifications

After approval of the SSP, the FWS may not impose any new requirements or conditions on, or modify any existing requirements or conditions applicable to, a landowner or successor in interest to the landowner, to compensate for changes in the conditions or circumstances of any species or ecosystem, natural community, or habitat covered by the CCAA except as stipulated in 50 CFR 17.22(d)(5) and 17.32(d)(5).

Any party may propose modifications or amendments to a SSP by providing written notice to, and obtaining the written concurrence of, the other Parties. Each SSP will contain provisions that allow for amendment of the SSP and describe the processes necessary for the parties to modify the SSP. In many instances, these provisions will be generic in order to allow the parties to the SSP to modify the SSP to meet the changing needs of the parties and/or the SSP's conservation program. For instance, it may be necessary to modify the SSP to change the boundaries of the enrolled property, or add or remove a conservation measure covered by the SSP. In order to facilitate an effective amendment process, the parties need to agree to a set of amendment stipulations that, at a minimum, includes: (1) a notification provision to ensure that all parties are provided any proposed amendments; (2) a provision that all parties are given a sufficient opportunity to review and respond to any proposed amendments; and (3) a provision that identifies how the parties will handle approval or denial of any proposed amendments.

3. Termination of the SSP

As provided for in Part 8 of the FWS's CCAA Policy (64 FR 32726, June 17, 1999), the Property Owner may, for good cause, terminate implementation of the SSP's voluntary management actions prior to the SSP's expiration date, even if the expected benefits have not been realized. If the SSP is terminated, however, the Property Owner is required to surrender the Certificate of Inclusion at termination, thus relinquishing the extension of take authority from IDFG's permit. The Property Owner is required to give 30 days' written notice to the other Parties of its intent to terminate the SSP.

4. Permit Suspension or Revocation

The FWS or IDFG may suspend or revoke a Certificate of Inclusion for cause in accordance with the laws and regulations in force at the time of such suspension or revocation (50 CFR 13.28(a)).

5. Dispute Resolution

The Parties agree to work together in good faith to resolve any disputes, using dispute resolution procedures agreed upon by all Parties. Participating landowners will receive a draft copy of the annual report by January 15th each year. They have the right to submit written comments concerning the report. Concurrence between the individual landowner and the agency will be reached before the final report can be issued, or any irreconcilable differences will be objectively noted in the final report. Landowners may retain their own specialists for a second opinion in cases of disagreement.

6. Succession and Transfer

This SSP and related permit shall be binding on and shall inure to the benefit of the Parties and their respective successors and transferees, (i.e., new owners) in accordance with applicable regulations (50 CFR 13.24 and 13.25). The rights and obligations under this SSP shall run with the ownership of the enrolled property and are transferable to subsequent non-Federal property owners pursuant to 50 CFR 13.25. The Certificate of Inclusion is also transferable to the new owner(s) pursuant to 50 CFR 13.25. If transferred, the new owner(s) will have the same rights and obligations with respect to the enrolled property as the original owner.

7. Availability of Funds

Implementation of this SSP is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this SSP will be construed by the Parties to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury or Treasury of the State of Idaho. The Parties acknowledge that the FWS or IDFG will not be required under this SSP to expend any Federal or State agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

8. No Third-Party Beneficiaries

This SSP does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this SSP to maintain a suit for personal injuries or damages pursuant to the provisions of this SSP. The duties, obligations, and responsibilities of the Parties to this SSP with respect to third parties shall remain as imposed under existing law.

9. Notices and Reports

Any notices and reports, including monitoring and annual reports, required by this SSP shall be delivered to the persons listed below, as appropriate:

VIII. Approvals

IN WITNESS WHEREOF THE PARTIES HERETO have executed this site-specific plan to be in effect on the date of the last signature below.

Enrollee

Date

Idaho Department of Fish and Game

Date

Natural Resource Conservation Service [If appropriate]

Date

U.S. Fish and Wildlife Service

Date

Appendix B. Template for Certificate of Inclusion

CERTIFICATE OF INCLUSION

In the

Programmatic Sage-grouse Candidate Conservation Agreement with Assurances between the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service

This certifies that the participating landowner of the property described in the site-specific plan is included within the scope of Permit No. _____, issued on _____, to the Idaho Department of Fish and Game under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1539(a)(1)(B). Such permit authorizes incidental take of greater sage-grouse by the participating landowner, as part of a Candidate Conservation Agreement with Assurances (Agreement), to conserve sage-grouse within the species' historical range. Pursuant to that permit and this certificate, the participating landowner is authorized to cause incidental take of sage-grouse as a result of land use activities identified in the Agreement and site-specific plan on the enrolled lands identified in the site-specific plan. Permit authorization is subject to carrying out conservation measures identified in the site-specific plan, the terms and conditions of the permit, and the Agreement, entered into pursuant thereto by the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service. By signing this Certificate of Inclusion, the participating landowner agrees to carry out all of the conservation measures described in the attached site-specific plan. As long as the enrollee is implementing the agreed upon Site-Specific Plan, the U.S. Fish and Wildlife Service will not seek further commitments or resources from the property owner during the term of this Certificate of Inclusion.

Property Owner

Date

Idaho Department of Fish and Game

Date

U.S. Fish and Wildlife Service

Date

Appendix C. Fair Share Model

Fair Share Model West Central Planning Area - CCAA

Introduction

The Candidate Conservation Agreement with Assurances (CCAA) Handbook (FWS 2003) identifies four situations which may be encountered when determining whether or not the CCAA meets the CCAA standard¹. The sage-grouse population in the West Central Planning Area (WCPA) has been ranked as having the greatest risk of extirpation in Idaho (Idaho Sage-grouse Advisory Committee 2006) and recent population estimates indicate declining trends (IDFG 2009 lek count analysis, unpublished data). Since this is an isolated population that has a relatively high risk of extirpation we consider the WCPA to be an “*Existing Situation that Needs Improvement to Meet the CCAA Standard.*”²

Since the existing situation in the WCPA needs to be improved to ensure persistence of the sage-grouse population, the question then becomes: How much improvement needs to occur throughout the area? Sage-grouse often make significant annual migrations across various parcels of land that are often under different ownership. Monitoring populations associated with a single landowner or parcel of land would be impractical, therefore, we used habitat as the measure of “improvement.” To ensure persistence of populations, sage-grouse require large landscapes that are relatively unfragmented and predominately covered with sagebrush. The amount of sagebrush cover in an area was the “single-best discriminator between occupied and extirpated ranges” of sage-grouse and landscapes with 50% or more of the area occupied by sagebrush cover types had a high probability of supporting persistent populations (Aldridge et al. 2008, p. 990; Wisdom et al., in press, p. 17).

To ensure a high probability of maintaining a viable sage-grouse population, conservation efforts need to account for the current lack of sagebrush cover and anticipate future losses that may occur through the “life” (30 years) of the Programmatic CCAA. Factors likely to account for the greatest loss of sagebrush cover in the WCPA are wildfire and exurban development. Landowners who are interested in enrolling under the Programmatic CCAA will need to agree to contribute to the maintenance of adequate amounts of sagebrush cover in the WCPA. Landowners applying for enrollment are likely to have varying conditions and circumstances on their properties. Thus, we have developed a process to account for differences in sagebrush habitat among landowners and to ensure equitable application of the CCAA Standard across all potential enrollees’ properties.

¹ CCAA Standard (50 CFR 13-17, FWS 2003, p. 4-5): Before entering into a CCAA, however, the Service must determine that the benefits of the conservation measures to be implemented, when combined with the benefits that would be achieved if it is assumed that conservation measures were also to be implemented on other necessary properties, would preclude or remove any need to list the covered species.

² The CCAA Handbook identifies four situations for which conservation measures in the CCAA can meet the CCAA standard, the other three situations include: 1) *Existing situation meets the CCAA standard*, 2) *Ongoing take*, and 3) *Voluntarily forgoing an action that would harm a candidate*.

Fair Share Model

The Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS) developed a Fair Share Model to determine if a landowner needs to restore sagebrush habitat to meet a minimum standard for enrollment. The Fair Share Model is used to determine the Objective Minimum Standard, which is the minimum amount of land an applicant will be required to agree to restore to sage-grouse habitat to obtain a site-specific plan (SSP) and become enrolled under the Programmatic CCAA³ (Figure 1). To receive assurances under the Programmatic CCAA, a landowner must be willing to contribute a “fair share” of the lands they wish to be covered under the SSP towards sage-grouse habitat, thereby, helping to ensure that adequate levels of sagebrush cover exist in the WCPA to support a persistent sage-grouse population. Restoration may be accomplished by either seeding/planting (active restoration) or by implementing grazing practices and fire prevention measures to allow the natural reinvasion of sagebrush to occur (passive restoration) during the course of the agreement. If a landowner meets the fair share, he will not be required to restore additional acres to sagebrush habitat.

Fair Share Model Components

1. Potential Habitat (Figure 1)

The amount of potential habitat is a key factor to calculating a landowner’s fair share. It includes both existing and potential habitat. To determine how much Potential Habitat there is, the acreage of Irretrievable Lands and the acreage of Ecologically Unsuitable Lands are subtracted from the Total Acreage of Covered Lands (as proposed by the enrolling landowner) (Figure 1).

- a. Total Acreage of Covered Lands:** Sum of the acreage of all parcels of land that a landowner wishes to enroll in a Site-Specific Plan.
- b. Acreage of Irretrievable Lands:** Sum of the acreage of all parcels of land that have been determined to be “Irretrievable” for socio-economic reasons. These lands may include but are not limited to: irrigated crops, sites around homes, outbuildings, and corrals areas.
- c. Acreage of Ecologically Unsuitable Lands:** Sum of the acreage of lands that have been determined to be ecologically unsuitable because they lack the ecological site potential to provide suitable sage-grouse habitat (e.g. soils are too shallow or rocky, forested habitat).

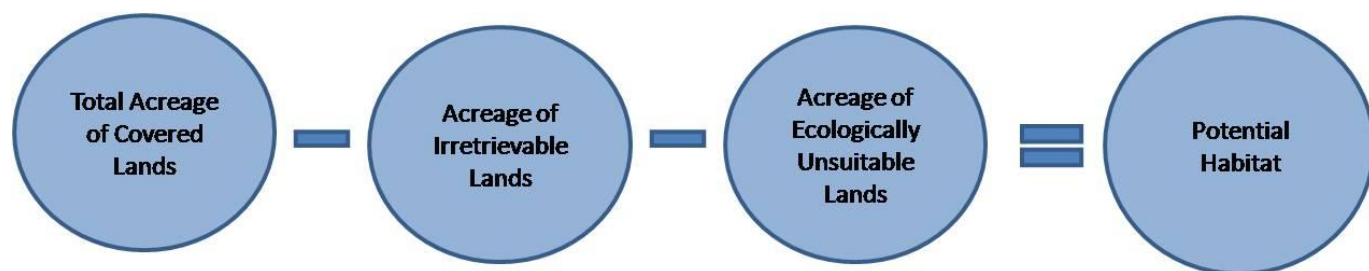


Figure 1. Potential Habitat Equation

2. 50% Suitable Habitat Factor

As discussed above, this factor is supported by the most recent scientific literature available and is being used to ensure that the sagebrush cover over the entire WCPA is maintained at a level

³ The Objective Minimum Standard only reflects the amount of land that an enrollee will be required to passively or actively restore. Enrollment under the CCAA also requires the applicant to agree to the *No Net Loss Standard* which prohibits the intentional destruction or unapproved modification of currently existing sage-grouse habitat on enrolled lands.

that will provide a high probability of persistence of the sage-grouse population (Aldridge et al. 2008, p. 990; Wisdom et al., in press, p. 17).

3. Estimated Loss to Fire Factor

We completed GIS analyses of fire history data to estimate the historic loss and predict future loss of sagebrush cover due to wildfire. Using an analysis of the historic trends in fire occurrences, we predicted that the WCPA would lose approximately 98,820 acres of sagebrush cover to wildfire over the next 30 years. Fire may affect Federal, State and private land. Since it is unreasonable to expect private landowners to account for acres lost on public lands and the WCPA is 64% private land the total estimated loss of sagebrush cover due to wildfire on private lands would be approximately 63,245 acres over 30 years. Natural recovery rates of sagebrush vary widely and are impacted by numerous environmental factors. Based on the major types of sagebrush found in the WCPA (*Artemisia tridentata xericensis* and *A.t. vaseyana*), we estimated that it would take approximately 20 years for sagebrush sites to begin providing sage-grouse habitat following wildfire. Therefore, we assumed that acres of sagebrush cover burnt in Year 1 through Year 10 would naturally provide sage-grouse habitat within the 30-year timeframe of the programmatic CCAA. Thus, 21,082 acres would naturally become available resulting in the remaining 42,163 acres (10%) of sagebrush cover that we predict will burn would need to be actively or passively restored on private land.

4. Estimated Loss to Exurban Development Factor

Projected population growth estimates for Washington and Adams counties through 2035 (Idaho Power 2008) estimate that the population of the WCPA would increase by approximately 3,650 individuals over 30 years. Since there are an average number of four people per household, we determined that there would be approximately 913 new residences constructed in the WCPA within 30 years. To estimate the number of residences that would likely be developed in sage-grouse habitat, we examined Idaho Department of Water Resources domestic well data. Using the number of wells developed over the last 30 years and their geographic locations, we conducted GIS analyses to determine the proportion of new households that would likely be developed in sage-grouse habitat. We then estimated the amount of effective habitat loss that would occur as a result of this development (180 acres/residence). This estimate is based on actual physical habitat losses (buildings, corrals, pastures, driveways, power lines) as well as disturbance factors (e.g., human activity, dogs and cats). Through this analysis, we estimated that the WCPA would lose approximately 51,049 acres (12%) of existing sagebrush habitat over 30 years to exurban development. All of this loss is predicted to occur on private land and would need to be accounted for to maintain adequate levels of sagebrush cover.



Figure 2. Fair Share Model Equation

Landowner Example

A landowner is interested in applying for site-specific plan under the programmatic CCAA. He (or they) has 1,000 total acres to enroll under the programmatic, which is split into 3 parcels (Parcel A, Parcel B, Parcel C) (Figure 3). Within Parcel A there is a large area (50 acres) around his home that has numerous outbuildings and corrals that has been determined to be “Irretrievable Land.” Also within Parcel A there is an old large pasture that has very shallow rocky soils. Soils and ecological site analysis indicates that this area does not have the ecological potential to provide sage-grouse habitat; therefore, it is also determined to be “Ecologically Unsuitable.” Parcel B is composed of three large rangeland pastures. Soils and ecological site analysis and baseline field evaluations indicate that all of 3 of these pastures have the ecological site potential to provide sage-grouse habitat, therefore it is determined that they are 600 acres of “Potential Habitat.” Parcel C is a large irrigated crop; therefore it is determined to be “Irretrievable Land.”

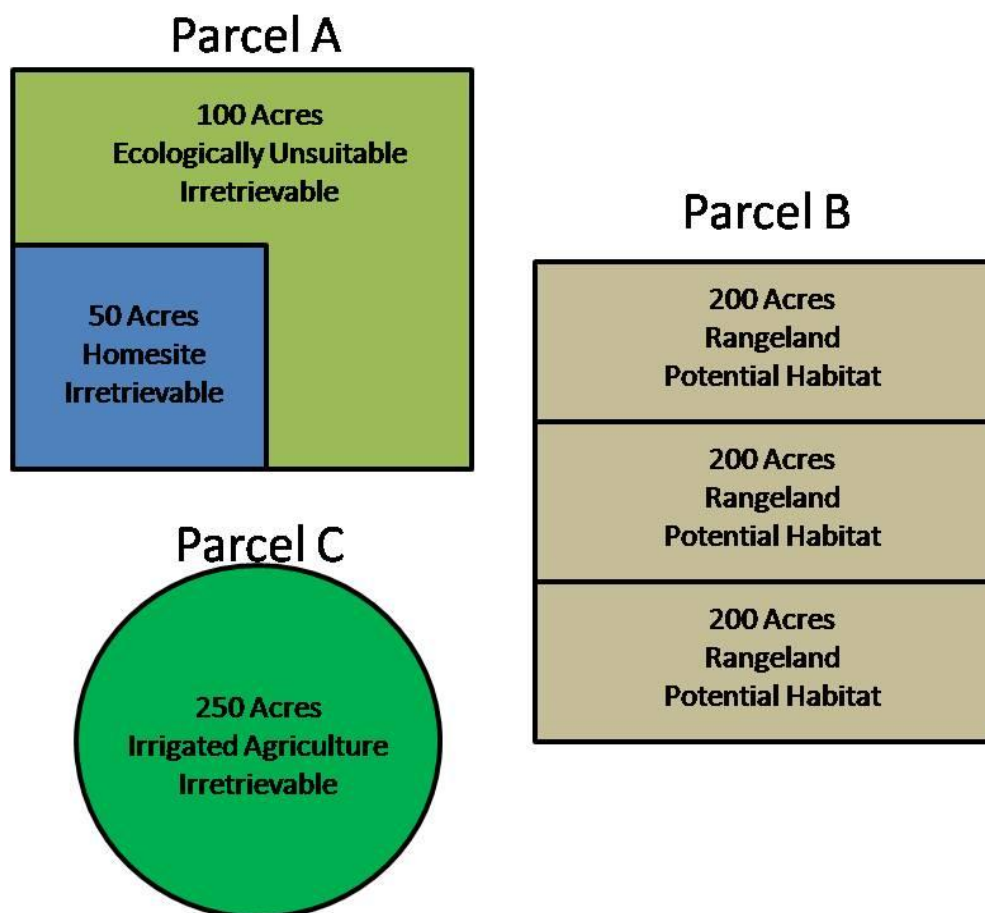


Figure 3. Example Landowner’s property that is being evaluated for enrollment in a Site-Specific Plan under the Programmatic CCAA.

What is the example Landowner's Fair Share?

Applying the Fair Share Model (Figure 4), the Landowner would need to agree to allow 432 acres of Potential Habitat to be maintained as sage-grouse habitat.

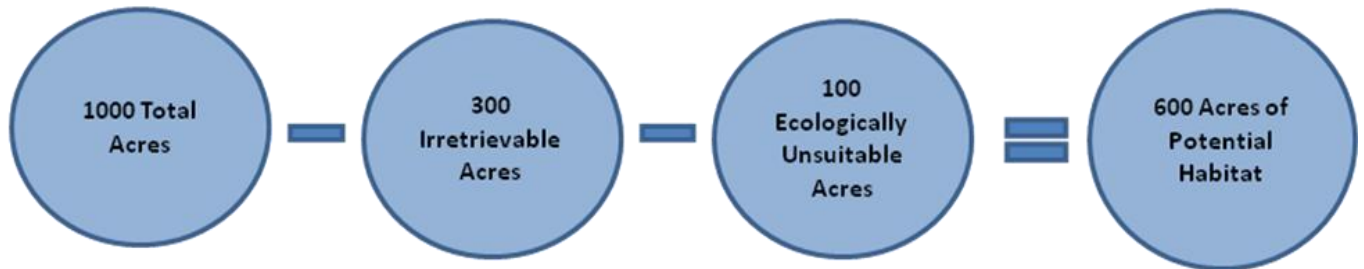


Figure 4. Illustration of how the Potential Habitat Equation is applied to the example Landowner's property.

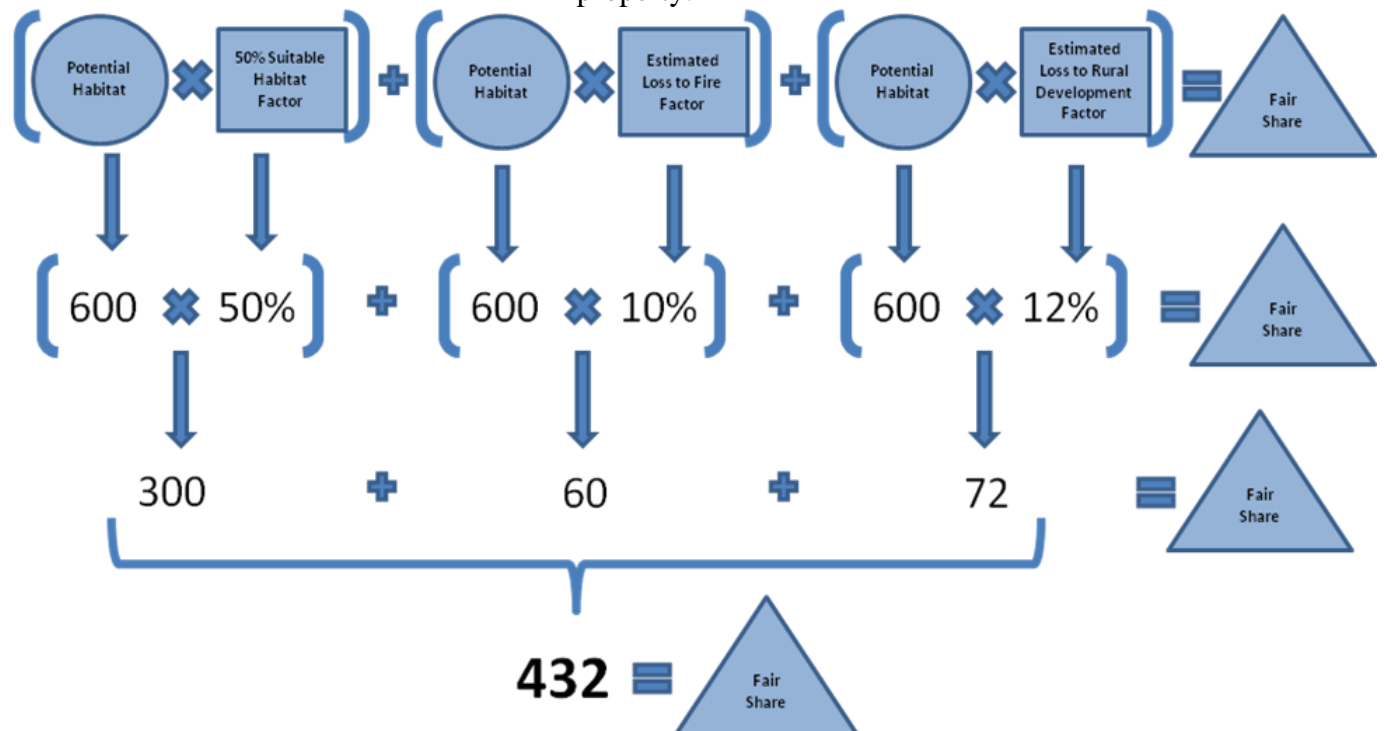


Figure 5. Illustration of how the Fair Share Model is applied to the example Landowner's property.

Is the example Landowner currently meeting the Fair Share?

To determine whether or not the existing situation on the Landowner's property meets the Fair Share standard, baseline field evaluations were completed on all lands determined to be Potential Habitat using the Bureau of Land Management's "Framework for describing sage-grouse habitat at multiple scales." Results from these evaluations indicate that Parcel B is the only area where there is "Potential Habitat" on the example Landowner's property; Parcel B – Pasture 1 (200 acres) is currently providing "Marginal" habitat, Parcel B – Pasture 2 (200 acres) is currently "Unsuitable," and Parcel B – Pasture 3 (200 acres) is currently "Suitable" (Figure 5). "Marginal"

habitat is sage-grouse, albeit low quality; therefore land that is determined to be “marginal” is counted towards the landowners Fair Share. Consequently, the Landowner currently has 400 acres of sage-grouse habitat (Pasture 1 and Pasture 3) which are counted towards his Fair Share⁴. Since the Landowner’s Fair Share was determined to be 432 acres and he currently has 400 acres of sage-grouse habitat, the landowner would need to agree to either passively or actively restore 32 acres of land to sage-grouse habitat over the course of a 30-year agreement. The nature of the restoration that will take place on the Landowner’s property will be determined cooperatively by IDFG, FWS, the Natural Resources Conservation Service (NRCS) and the landowner.

Parcel B		<u>Ecological Site Potential</u>	<u>Current Site Suitability</u>	<u>Counts Towards Obj. Min. Standard</u>
200 Acres Rangeland Pasture 1	→	Suitable	Marginal	Yes
200 Acres Rangeland Pasture 2	→	Suitable	Unsuitable	No
200 Acres Rangeland Pasture 3	→	Suitable	Suitable	Yes

Figure 6. Illustration of the results of example Landowner’s baseline field evaluations and their application in the Fair Share Model.

How can the example Landowner meet the Fair Share Standard?

There are numerous approaches the example landowner could take to obtain 32 more acres of sage-grouse habitat on his enrolled lands. Baseline field inventories are completed on the pastures and here are a few possible outcomes:

Situation 1: Pasture 2 is perennial seeded grassland that has a few young sagebrush plants currently being reestablished. If succession were allowed to continue the pasture would provide sage-grouse habitat within 30 years. The example landowner agrees not to actively inhibit (e.g. prescribed burning, mechanical treatments, herbicides) the natural restoration of sagebrush cover in that pasture for the next 30 years. By agreeing to allow 200 acres to become sage-grouse habitat over the course of his agreement, the landowner has met and exceeded the 32-acre Fair Share standard.

Situation 2: Pasture 2 is perennial seeded grassland that has little or no sagebrush within it or on adjacent lands. It is determined that active restoration would likely be needed to reestablish sage-grouse habitat within 30 years. The landowner agrees to work with NRCS, IDFG, and FWS to reseed 32 acres of land with a native seed mix that includes sagebrush. By agreeing to actively restore 32 acres of land, the landowner has met the remainder of his Fair Share standard.

⁴ Only private property may count towards the Fair Share. Habitat on landowners associated public land (e.g. State or Federal grazing allotments) will not be figured into the Fair Share Model.

Conclusion

The Fair Share Model provides an objective minimum standard for habitat restoration that would ensure a high probability of persistence of the sage-grouse population in the WCPA and ensure equitable treatment for applicants. For those landowners who do not already meet the Fair Share, we will use it to determine the minimum amount of habitat an applicant will be required to agree to actively or passively restore to sage-grouse habitat over the length of their agreement. Since the Fair Share Model was designed to determine the *minimum* amount of habitat required for enrollment, a landowner may agree to additional habitat restoration conservation efforts. Due to the difficulty in restoring rangelands back to native shrub and grass communities, we are not requiring that restoration efforts on those acres be completely successful. However, the landowner must work with IDFG and other appropriate entities to create the most conducive environment for restoration to succeed (e.g. a second reseeding effort may be required). These efforts will be documented in the annual report (as described in the CCAA). Since the Fair Share only applies to providing an ample amount of sagebrush habitat, conservation measures (Table 5, CCAA) will be requested by IDFG and agreed upon by the applicant to meet other threats to sage-grouse.